THE IMPACT OF INVESTORS' SENTIMENT AND MONEY SUPPLY ON STOCK RETURNNS IN NIGERIA

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ABSTRACT
The objective of this study is to empirically establish the relationship between investors' sentiment and money supply on stock return in Nigeria. The study is correlational in nature and used panel regression model to test the hypotheses. Using 10 listed firms as the sample size from 1st January 2008 to 31st December 2021 out of the 156 firms listed on the Nigerian stock exchange. The study found the presence of a positive and insignificant link between investor sentiment and stock return, also showed the presence of a positive and significant relationship between money supply and stock return. Consequently, the study recommended that, there is need for the policy makers and regulators of the Nigerian capital market to consider sentiment amongst investor as an indicator for price movement in the stock market; and adequate quantitative data on sentiments should be made available to guiding both existing and potential investors on their behavioral approaches towards the market. The central bank of Nigeria should maintain a steady and realistic liquidity injected into the economy at a level that will boost investment in stocks.

Keywords: Stock returns, investors' sentiment, money supply
JEL Classification: E41, E49, E51, E52, G14, G18, G110

1. INTRODUCTION
Traditional finance theory assumes that, the capital market is efficient; as such investors are rational and use the information available in the market to making resource allocation decision. However, behavioral finance theory suggests that investors' psychological state (investor' sentiment) influence their investing decision (Fonou-Dombeu et al, 2024)

Furthermore, over the years, the continuous irregularities in global stock market have presented great challenges to classical finance theories, as a result of the activities of irrational traders who make investing decision based on emotion, biases, or flowed reasoning instead of fact base analysis and sound investment principle (Li & Liu, 2020). However, the "efficient market hypothesis (EMH)" posits that stock market globally is perfectly efficient, and that asset prices reflect all publicly available information. This suggests that stock prices trend in equity prices are very difficult to predict with high degree of precision (John et al, 2023). The EMH stood as the leading theoretical framework for market analysis for decades (Hu, & Ma, 2021), stating that market participants are rational, so asset prices fully reflect all publicly and private available information. However, the efficient market hypothesis has faced a number of

criticisms which emanated from the observed challenges in its adoption (Garleanu & Pederson, 2018; Sallim et at, 2021)

As a consequence, the inability of traditional asset pricing models to explain some of the striking events in the history of the stock market has led to the emergence of behavioral finance which argues that some of the anomalies observed can be attributed to noise created through trades which are motivated by sentiment and take cognizance of the impact of human emotions such as greed, fair or panic which as a result made investment decision become a topic of discussion in financial literature (Rupende, et al 2019; Chandra& Thermozhi,2017).

In Nigeria, the areas of macroeconomic factor (money supply) as well as its effect on stock returns have attracted a lot of interest by researchers'. Many researchers have attempted to examine the impact of macroeconomic factor on stock return (Ejike, 2021; Olugbenga, 2014, Onyinyechi & Mlanga 2019, Josiah, & Akpoveta, 2019; Agwu et.al 2020). On the other hand, there are handful of studies on the area of investor sentiment and its impact on stock return in Nigeria. It is against backdrop that this study seeks to combine the both effect that is the impact of investor sentiment and money supply on stock returns in Nigerian furthermore, this study adds to the existing literature by constructing an investor sentiment index along the panel regression model which to the best of researches knowledge no studies have been conducted with these combined variables and models. This study is expected to make a noteworthy contribution to the existing literature and of immense advantage to investors, portfolio manager, and policymakers by presented proof regarding the impact of investors' sentiment and money supply on stock returns in Nigeria.

The remaining sections of the paper are structured as follows: section 2 provides a review of theory and relevant literature including prior researches from both developed and emerging markets. Section 3 details the data and methodology used in this research. Section 4 presents the findings, while section 5 offers conclusions and recommendations.

2 LITERATURE REVIEW

2.1 Conceptual Literature

The Concept of Stock Return

Matovu, (2022) considered return to be the basic motivating factor and the principal reward in any investment process. A return can take the form of realized return that is, the return which is actually earned and the expected return which is the return an investor hopes to earn over some future period of time. The expected return on the other hand is a predicted or estimated return and is likely to occur or not to occur. Mugambi and Okech (2016) defined stock returns as the increases or decrease in the value of a stock and it is usually given as a percentage of the stock returns of any capital gains and any revenue that is received from the investment in the financial asset. So, investors at the stock market look at the stock returns before considering investing in a given stock.

The Concept of Investors Sentiment

Investors' sentiment, otherwise known as market sentiment has been a subject of interest for many years, basically, in finance literature. In investment context, sentiment is considering to mean fluctuation or changes in risk tolerance or overly optimistic or pessimistic cash flow forecast by individual or institutional investors (Aime & Tanko, 2020). When sentiment rises, investors seek to increase their investment allocation to risky assets, thereby bidding up valuations and in the process, lowering the expected future returns on those assets. While,

Baker and Wurgler (2006) assert that investor sentiment as the belief about future cash flow or discount rates that are not supported by prevailing fundamentals. In a similar vein, Wang et al. (2021) conceptualized investors' sentiment as the belief, concerning risk and return that is not back up with facts, in guiding investors' decision in the market. More so, El-Gayar, (2021) explained that, investor sentiment is an act of trading on noise rather than information propensity. In other words, it is referring to excessive pessimistic (bearish) or optimistic (bullish) investors in the stock market's current and future prices.

The Concept of Turnover

Hu et al. (2021) explained that, liquidity can be utilized as a measure of investors' sentiment, the reason is that, investors happen to exhibit lower emotions in the downturn of the stock, and higher feelings at upsurge of the stock market, we can measure market liquidity by the rate of turnover of the market. In the same vein market turnover is the log of the total market turnover that is, total naira volume over the years divided by total capitalization at the end of the prior years (Baker and Wurgler, 2004). In addition, market turnover indicates how much trading activities that took place on a given day in the market as a whole or individual stocks. Therefore, turnover can be represented in two ways: traded value in naira and traded volume in number of trade, and higher turnover in a stock indicates a better liquidity which means that, it is easier to sell the stock in the market (Baker &Wurgler, 2012).

The Concept of Dividend Premium

As defined by Zheng (2020), dividend premium is the estimating or calculating the standard deviation of the monthly continuous compounded returns based on daily returns. In addition, volatility premium is defined as the year end log ratio of the value-weighted average market-to-book value ratio of high volatile stocks to that of low volatile stocks. Similarly, Baker and Wurgler, (2006) defined dividend premium as the difference between the average market-to-book ratio of dividend payers and non-dividend payers. Generally, dividend paying stocks are perceived as less risky with, more predictable future cash flows, as they are associated with larger and more profitable firms.

Similarly, Zaharieva, (2012) defined dividend premium as the log difference between average book-to-market value of dividend payers and non-payers. The dividend premium represents a firm propensity to pay dividend and can serve for proxy for safety. That is those firms which are larger, profitable, but with low growth opportunities (Baker & Wurgler 2007)

The Concept of Number of Initial Public Offerings (NIPO)

First and foremost, initial public offerings (IPOs) are the most prevalent and popular form of equity issues all over the globe. This method allows firm's security to be sold for the very first time to the general public, with the expectation of building a liquid market for the firm's stock. Similarly, IPOs are issued by firms in order to raise capital for financing new projects. The price of IPOs, shares are sold substantially lower than the price at which the shares are subsequently traded at the market (Bayer, 2008)

Aime and Tanko (2020) suggest that NIPO is an indication of great supply of equity shares by companies to the investors who are available in the market place. The NIPO determine the volume of equities which are traded in the market, and as well increase the entire market index. Share turnover (TURN), is the ratio of total value of shares traded during the period divided by the average market capitalization for the period. The average market capitalization is calculated as the average end of the period values for the current and previous period. turnover or liquidity

generally might capture sentiment due to the fact that irrational investors prefers betting on raising stocks in the market with short sale constraint when they are optimistic than pessimistic and therefore add liquidity (Baker & Stein 2004)

Almansour, (2015) describes the term "initial public offering" (IPO) of equity as when a particular firm for the first time start selling common stock to the public. In other words, there is no activity in the public market for the stock at the time or period of IPOs (Reilly & Brown, 2006). Similarly, Baker et al (2009) explained initial public offerings as the number of initial public offering made during a year and the initial public offering earn a remarkable return that become very difficult to define the role of investors' enthusiasm behind it.

The Concept of Return on Initial Public Offerings (RIPO)

Baker and Wurgler (2012) defined return on initial public offering as the average initial (most often first day return) on that years offering. The IPO market is often regarded as a reflection of the expectations and beliefs of investor, with high first day returns reflecting investors' enthusiasm (Loughrant & Ritter, 1997). Baker and Wurgler (2007) contend that firms are more likely to offer an IPO when investor sentiment is high. In such periods, investors are generally over optimistic on the newly issued shares which may induce greater first day returns and provide additional benefit for newly listed firms. Hence, the underlying demand for IPOs is perceived to be extremely sensitive to the prevailing sentiment in the stock market. According to Finter et al, (2012), the returns on initial public offering is defined as the difference between the IPOs offer price and the initial prices of stock at the first day trading. RIPO is calculated as the difference between the first day trading price and the offer price divided by the offer price.

The Concept of Money Supply

According to CBN, (2016) money supply is the sum of all monetary assets that can easily be converted to cash in an economy at a specific time. It is often referred to as money stock since it is measured at a particular point in time. Money supply is closely monitored by monetary authorities-central bank – because if the rate of increase in money supply is consistently greater than the rate of increase in total output of goods and services in the economy, there could be a general increase in the domestic prices of goods and services: a situation generally referred to as inflation. The supply of money is the total amount of money that is circulation in the economy. Production, consumption and corporate earnings and savings are stimulated by an increase in purchasing power which is caused by an increase in money supply in the economy (Abdulla et al. 2014).

Money supply can be measured by M0 which described currency, and the amount of money held by people. M1 includes M0 and deposits, and M2 which forecast issues like inflation. M2 comprises of M1 and near monies like savings accounts, money market deposit account, and mutual funds (faith 2021). Similarly, the entire aggregate of money circulated in the economy is referred to as money supply. Again in buying power, which is supported by an increase in the economy's money supply, boost productivity, consumption, corporate profitability, and savings.

2.2 Theoretical Literature Review

2.1.1 Capital Asset Pricing Model (CAPM) Theory

The Capital Asset Pricing Model (CAPM), which is based on the investment portfolio diversification theory was propounded by Markowitz (1959), was first proposed by Sharpe (1964) the Nobel Prize winner in economics in 1990. Similarly, CAPM reveals the connection between asset investment returns and risks; this represents the important progress and breakthrough in the field of finance, and is one of the basic theoretical foundations in modern finance. The reason behind CAPM is that, in a capital market of competitive equilibrium, non-systematic risks can be completely eliminated through diversification, only systemic risks, which cannot be diversified, have an impact on the expected return (measured with coefficient β), and in fact, the expected return is in linear correlation with coefficient β. Since the fundamental of portfolio theory is eliminating non-systematic risks of investors through diversification, the investors can choose the best portfolio from assets of different risk and return characteristics, to guarantee the minimum overall risk; also, they can find an investment portfolio with the maximum return under a given risk or a portfolio with the minimum risk under a given return.

The CAPM is an economic model that describes how securities are priced in the market place. The model is often used in conjunction with fundamental analysis, technical analysis and other methods of sizing up securities when making investment decisions.

2.1.2 Arbitrage Pricing Theory

The arbitrage pricing theory was developed by the economist Ross in (1976). This model explains the relationship between return and risk, the theory links the expected return of an asset to the return from the risk-free asset and a series of other common factors that systematically increase or decrease the expected return. Arbitrage Pricing Theory assumes markets sometimes misprice securities whether underpricing or over pricing the market.

Arbitrary pricing theory (APT) factors are those systematic risks that cannot be eliminated by the diversification of an investment portfolio; the macroeconomic factor (money supply) that has proven most reliable as price predictor.

The inputs that make the arbitrage pricing model complicated are the asset's price sensitivity to factor n (βn) and the risk premium to factor n (RPn). The Arbitrage Pricing Theory can be expressed as a mathematical model

2.3 Empirical Literature Review

Hsing **(**2011) investigate the impact of macroeconomic variables on stock returns on the stock market in Croatia, using a period of 10 years from 2007 to 2009. The objective of the study was examining the impact of macroeconomic variable on stock returns, GARCH model was used to analyze the data. The study reports positive association with the macroeconomic variable used in the study, however, the study was conducted in Bulgaria not in Nigeria, so variation on macroeconomic policies could limit its application in Nigeria. Hussain (2012) examined the impact of macroeconomic variable on prices in Karachi stock market in Pakistan; the research objective was to find a long term link between macroeconomic variables and stock prices. Secondary data were used and utilizing a period of 10 years spanning from 2001 to 2010; vector correction model as (VCM) to test for relationships. The study revealed a positive connection between macroeconomic variables and stock prices; the short coming of the study was the use of 9 years' period to test for long term relationship

Issahaku (2013) employed monthly time series data spanning from January 1995 to December 2010, and vector correction model (VCM) was used to establish a relationship. This was to evaluate the impact of macroeconomic variable on stock returns, with the objective of examining the existing causality between macroeconomic variable on stock return in Ghana.

The study revealed a positive connection between macroeconomic variables on stock return both in the short run and long run, however, the study may have been over taken by time due to new development in the financial sectors. Olugbenga (2014) assessed the impact of macroeconomic variable on stock return in Nigeria from 1985 to 2009. The study used Johasen co-integration techniques to establish a relationship. The objective was to examine whether each of the macroeconomic variable have any significant impact on the stock prices. The study showed that, macroeconomic variables have strong positive and significant impact on stock prices; the study did not reveal how unstable asset prices are as a result of changes in macroeconomic policy.

Josiah and Poveta (2019) used a period spanning from 1986 to 2014 to examine the impact of macroeconomic variable on stock returns. The objective was to assess the influence of macroeconomic variable on stock return in Nigeria stock market. Error correction model and granger causality test were utilized to establish a connection. The study found that, positive relationship, but the need to expand the period to 2023 and conduct a study in Nigeria is critical in view of monetary policies stance of government in recent times. Nigeria has experience unstable exchange rate regime and inflation rate. While Edame and Okoro (2013), examine the impact of capital market on economic growth in Nigeria, utilizing capital market variables such as market capitalization, number of deals in the market, value of transaction and interest rate, for the period covering from 1980-2010. From the result obtained, capital market has positive and significant impact on economic growth in Nigeria. The capital market variables captured in the model such as market capitalization, number of deals and value of transactions were all positive and significant in promoting economic growth in Nigeria. They emphasized the need for the federal government to implement policies that will make the market more efficient and re-position it for growth in Nigeria.

Abbas (2019) evaluated the impact of macroeconomic variables and stock return and the objective was to examine the relationship between macroeconomic variable and stock in KSE index. Secondary data were employed using 10 years' period ranging from 2002 to 2012 using regression and correlation model. The finding of the study showed a positive relationship between inflation rate and stock return, GDP has positive link with stock return. The limitation of the study is that, the domain differences and period cover may affect the application in Nigeria. Sahoo et al (2020) investigates the impact of macroeconomic variable on stock return, with the objective of examining the linkages among macroeconomic indicators and stock return during the period 2015 to 2019. The study applied t-test and ANOVA model to test for relationship. The empirical finding presents a positive relationship. However, a period longer than 4 years would have been better.

In the work of Baker et al. (2012) evaluated the global, local and contagion investor sentiment, the purpose of the study was to construct an investors sentiment index in the united states of America (U.S.A). Using 25 years' period spanning from 1980 to 2005 and data were obtained from Mathias Van Dijk of listed companies. The empirical finding revealed a positive relationship between sentiments and stock prices. Furthermore Xintian **(**2017) evaluated the impact of investor sentiment on stock return; the purpose of the study is determining the relationship between sentiment and stock return. The study used 4 years' period ranging from 2010 to 2014 utilizing ARMA model, and Granger causality test to establish the relationship. The finding revealed a positive relation between investors' sentiment and stock return. The inability of the study to expose the period in which sentiment is low or high reveals it shortcoming. In another similar study, Rupande et.al (2019) investigated the impact of investors' sentiment on stock returns in South Africa. The data collected were analyzed using

GARCH model and E-GARCH model of Nelso (1991) from the period between 2002 to 2018, the empirical findings show that, there is a positive and significant connection between investor sentiment and stock returns. Also the study fails to utilized a single model to prevent the findings from being ambiguous.

In a related study, using 13 years' period spanning from 2006 to 2019 Lan et al (2020) assessed the impact of investors' sentiment on stock return, and the objective of the study is to determine the link between sentiment and stock returns in Shanghai stock market. Regression model was used for data analysis and to establish relationship. The empirical findings show a positive relationship between sentiment and stock returns. Madhumita and Subramanian (2020) evaluated the impact of investors' sentiment on stock. The objective is to assess the connection between sentiment and stock volatility in India utilizing a period from 2012 to 2018 using market sentiment index. The study reveals that investors' sentiment positively determines stock return. However, GARCH model would have been best suited in testing volatility.

Wang et.al (2021) empirically explore the relationship between investors sentiment on stock return in the United Kingdom (UK) utilizing a total of 50 stock market from 2001 to 2015. The objective of the study is to determine the relationship between investor sentiment and stock returns. The study uses regression model to analyze the connections between variables, the empirical finding reveal that investor sentiment negative predict stock return. Fonou-Dombeu et al (2024) investigated the effect of investor sentiment on stock return sensitivity to fundamental factors in South African using a sample of 1,386 firms between 1990 and 2022. The study utilized regression model to establish a relationship between variables, and the study indicated a positive relationship between fundamentals factors to stock return except for measures of earning quality which is appear to be contrary. Okeowo and Awotade (2024), carried out a studied of money supply, exchange rate and output growth volatility in Nigeria. The studied showed that the supply of money and the rate at which one currency is exchanged for another can be an important determinant of output growth volatility. The paper used money supply, exchange rate and output variables in its analysis.

On the other hand, Adegboyega and Lawrence (2024), using time series data from the central bank of Nigeria, statistical bulletin (2023) and the WDI (2023), examined the effects of Foreign Direct Investment on Gross Domestic Product, Gross Capital Formation and Manufacturing Capacity Utilization in Nigeria between 1986 – 2022. Results indicates that increase in FDI will increase GDP and Gross Capital Formation in the short run, while all the variables have a long run convergence to equilibrium.

3. METHODOLOGY

3.1 Theoretical framework

This is anchored on the Capital Asset Pricing Model (CAPM) theory, and the Arbitrary Pricing Model. These theories were adopted because the former is based on investment portfolio diversification, which is internal to the firm, and it connects asset investment return and risk. While the later explain the relationship between expected return and external factors that affect not only individual security but the market returns as a whole, and one of these factors is money supply.

3.2 Model Specification

To achieve the goal of the study, multiple regression analysis is utilized to evaluate the impact of investors' sentiment and money supply on stock returns in Nigeria. Stock return was used as a stand in or dependent variables. The investors sentiment was proxy by (turnover, dividend premium, return on initial public offering, number of initial public offering), and money supply as the explanatory variables in the model. The investor sentiment was also model through the construction of sentiment index as modeled by Baker and Wurgler (2012) model.

3.2.1 Market Sentiment Index

Based on the past studies, a number of variables are identified and tested to measure the investor sentiment through the construction of sentiment index. This study follow same test adopted by Baker and Wurgler (2006), Brown and Cliff (2004) to also formulate an index for this study. Similarly, for the purpose of this study, four variables were used to construct an index as used is the work of Baker and Wurgler (2006) and these variables are: turnover, dividend premium (volatility premium), number of initial public offering (NIPO), and return on initial public offering (RIPO)

The functional form of the model is specified thus:
Sentiment index = $f\ (TURN, RIPO, NIPO, DIVP)$ …… (3.1)
Sentiment index=$\beta_1(TURN)_t+\beta_2(RIPO)t+\beta_3\ (NIPO)t+\beta_3\ (DIVP)_t$…….(3.2)
Where
TURN = turn over
RIPO= return on initial public offering
NIPO= number of initial public offering
DIVP= dividend premium
Turnover is measured as
TURN = $\frac{vototal\ lume}{market\ capitalization}$
Initial public offering first day return is measures as
RIPO = $\frac{Pi1-Pio}{Pio}$
Where
RIPO = the return on IPO
Pi1 = the first day closing price
Pi0 = the offer price
Number of initial public offering will be measure as follow
NIPO = the number of IPO for the particular year
Dividend premium or volatility premium is measure as
DIVP = Standard deviation of the monthly returns base on daily returns
Therefore, the basic form of a model is the parsimonious equation to be estimated as direct relationship

$SRit = \alpha o + \beta_1 INVS_{it} + \beta_2 MOS_{it} + \varepsilon_{it}$…… (3.3)

Where

SRit= Stock return of security at time t

$INVS_{it}$= Investor sentiment at time t

$MOS_{it=}$ Money supply at time t

ε_{it}=stochastic disturbance term for stock return

Stock return is measured using this model

$$SRit = \frac{pt-pt-1}{pt-1}$$

Where

*SRit*is as previously defined

Pt = Price of the asset at time t

Pt-t = Previous price of an asset at time t

Money Supply is measured as follows

M2 = money supply

M1 = sum of all paper notes and coins in circulation in current account

TD = time deposit

SD = savings and deposit with DMBs

Table 3.1 Description and Variable Measurement

Variable	Variable type	Variable measurement	Source	Apriori
Stock return(SR)	Dependent	Measure as the closing price of listed firm to the opening price of listed firms of NGX	Olugbenga (2014)	N/A
Investor sentiment index				
Turnover (TURN)	Independent variable	Measure as the total naira volume over the years divided by total market capitalization	Hu et al. (2021) Baker and wugler(2004)	+
Dividend premium (DIVP)	Independent variable	Measure as the standard deviation of the monthly returns base on compounded daily return	Zheng (2020)	+
Number of initial public offering (NIPO)	Independent variable	Measure as the number of initial public offerings	Baker and Wurgler (2009)	+
Return on initial public offering (RIPO)	Independent variable	Measure as the first day average initial returns	Baker and Wurgler (2007)	+
Money supply	Independent variable	Measure as the Broad money: narrow money , time deposit, and saving deposit	CBN 2016	+

Source: Compiled by the Authors' March, 2025.

3.3 Techniques of Data Analysis

The data gathered for this study can be evaluated using a number of techniques. Both descriptive and inference statistic was used to analyze the data. The descriptive analysis anchored on the presentation, and discussion of fundamental descriptive elements such as mean, median, minimum value, maximum value, skewness, kurtosis, and normality test. The Panel regression model was employed for the inferential statistic.

4. RESULTS AND DISCUSSION OF FINDING

In order to determine the inter-connections of the variables, this section commence by evaluating the summary statistic. This gives a shape insight of the pattern in the data. The summary statistic and correlational matrix are presented below

4.1 Descriptive Statistics

Table 1. Summary of Descriptive Statistics

	SR	ISD	MOS
Mean	0.04	0.31	7.56
Minimum	-0.54	-3.50	6.66
Maximum	0.54	2.59	9.62
Std. Dev.	0.27	0.96	0.80
Skewness	-0.18	-0.82	1.74
Kurtosis	3.11	4.82	4.78
Jarque-Bera	0.8230	34.8402	88.4416
Probability	0.6626	0.0000	0.0000
Observations	140	140	140

Source: Eview 10 output

As show from the above table, the average mean value for stock return (SR) is 0.04, suggesting a positive return around the center of the return. The minimum value is -0.54 to the maximum value of 0.54 indicating the highest return within the variable. The standard deviation of 0.27 showing that there is a small dispersion of the stock return around the mean, and the skewness of return is -0.18 indicating a negative skewness with a kurtosis of 3.11, meaning that the returns are fairly perfectly distributed. In addition to that, the Jarque-Bera normality statistics value for stock return is 0.8230 while the probability value is 0.6626 therefore, the data do not have a normal distribution given the null hypothesis assumption that there is a normal distribution, similarly, the Jarque_Bera statistic is small and a p-value of 0.6626 which greater than critical value we therefore reject the null hypothesis.

ISD analysis show that there is an average value of 0.31 indicating the average value of ISD around mean, and the minimum value is -3.50 and maximum value of 2.59 showing the highest ISD around the mean. Given the standard deviation of 0.96 also indicate that the dispersion is small around the mean which could possibly not affect the investment ret urns. The skewness of -0.82 and the kurtosis of 4.82 indicate a normal distribution but peak and playtykurtic since 4.82 is greater than 3. The Jarque-Bera normality is 34.8402 while the probability is 0.000 which is highly significant; therefore, we accept the null hypothesis. The table also shows that the mean for money supply (MS) is 7.56 which indicate data having more of positive values than negative values, and the standard deviation of 0.06 indicating a much smaller dispersion around the mean. The maximum and minimum money supply is 9.62 and 6.66 respectively, indicating that the range is too wide, and that, 9.62 is the highest money supply within the study

period. Similarly, the skewness is 1.74 and the kurtosis of 4.78 indicating data is symmetrical to the right and the kurtosis is peak and positive. Meaning that, money supply is not perfectly distributed. The Jarque-Bera normality statistic value is 88.4416 and with a p-value of 0.000 suggesting the data is not normally distributed since the Jaeque-Bera value is large and the P value is less than 0.05. Therefor we reject the null hypothesis which state that there is normal distribution

4.2 Correlation Matrix

Table 2. Correlation Matrix

	SR	ISD	MOS
SR	1		
ISD	-0.0441	1	
MOS	0.2435	0.0974	1

Source: Eview 10 output

The above matrix table depicts the degree of direction and association between each variables being analyzed. A correlation coefficient with negative sign reveals that, there is an opposite relationship between the two variables. The correlation result indicates that, investor sentiment and money supply are positively correlated to stock returns. These correlations are given by the coefficient of -0.0441 and 0.0974 respective. Similarly, a correlation coefficient with positive signs reveals that, there is positive relationship between the two variables.

4.3 Cross section fixed effect test

This section presents the results of cross section fixed effect with (AR). It also draws its conclusions in line with the hypotheses formulated. The summary of the result obtain from the cross-section fixed effect is presented below

Table 3 Cross-section fixed effect with AR (1)

Variables	Coefficient	Std. Error	t-statistics	P-values	Decision
C	1.136469	2.266162	0.501495	0.6170	
ISD	0.000105	0.000459	0.227706	0.8203	Accept
MOS	0.124937	0.032068	3.896007	0.0002	Reject

R-squared	0.392486
Adjusted R-squared	0.311842
Standard error	0.225268
Durbin- Watson stat	1.992265
F-statistics	4.866926

Source: Eview 10 output

4.4 Testing of Hypotheses

On this section, the study tested two hypotheses to determine direct relationship between investor sentiment and money supply on stock return in Nigeria. Given the regression result in above table, ISD has a coefficient value of 0.000105 and an insignificant p-value of 0.8203. This indicates that, investor sentiment is positive and, is insignificantly influencing the stock returns of firms listed in the Nigeria Exchange Group (NGX). This signifies that, for every increase in investor sentiment, there will be corresponding increases in stock returns.

The result shows that there is an insignificant relationship between investor sentiment and stock return of listed firms in the Nigeria Exchange Group (NGX). Hence, the study fails to reject the null hypothesis which state investor sentiment has no significant effect on stock return in Nigeria.

Table 3 also revealed that money supply has a significant effect on the stock returns in Nigeria as indicated by a positive coefficient value of 0.124937and a significant p-value of 0.0002. This showed that, money supply is positive and statistically significance to influencing stock returns of firms listed in the Nigeria Exchange. Group (NGX). Meaning that when money supply increases by one it would lead to an increased in stock returns in Nigeria. Therefore, the study rejects the null hypothesis which states that, money supply has no significant effect on stock return in Nigeria.

5. CONCLUSIONS AND RECOMMENDATIONS

Investor sentiment is found to be positively and statistically insignificant in influencing the stock returns of firms listed in Nigeria Exchange Group (NGX) as indicated by a coefficient value of 0.000105 and p-value of 0.8203. This concludes that as investor sentiment increases stock returns of listed firms also increases. This result agrees with prior studies of Rupendee (2019), Madhumita and Subramanian (2020). Conversely the study did not agree with the findings of Wang et. al (2021), Wang et. al (2021) Grigaliuie, (2010), Bathia and Bredin (2012). Furthermore, money supply has a positive and statistically significant in impacting on the stock returns of firms listed in the Nigeria Exchange Group (NGX). The money supply has a coefficient of 0.124937 and a p-value of 0.0002. The result suggests that, as money supply increase by one, it reduces the stock return also. This finding also agrees with the studies of Hsing (2011), Josiah and Poveta (2019).

5.1 Policy Recommendations

Following the findings and conclusions, the study makes the following recommendations with a view to strengthening the market activities, particularly to listed firms in Nigeria Exchange Group (NGX).

i. There is need for the policy makers and regulators of the Nigerian capital market to consider sentiment amongst investor as an indicator for prices movement in the stock market; and adequate quantitative data on sentiments should be made available to guiding both existing and potential investors on their behavioral approaches towards the market.
ii. The Central Bank of Nigeria should maintain a steady and realistic liquidity injected in the economy so as to increase economic activities which will certainly translate to firms' profitability, which as a result cause stock prices to rise. At 1% level (change) in money supply in the short run leads to an increase in stock return by 38.94%, and in the long run by 49.26% respectively
iii. Since a one percent (1%) level (change) in money supply in the short run leads to an increase in stock return by 38.94%, and in the long run by 49.26% respectively, it is important that the federal government as well as the private sector through the central bank of Nigeria pay more attention to investment in the Capital market to increase productivity in the Nigerian economy.
iv. There is need for the government through the central bank to implement policy that will increase the level and size of market capitalization in the capital market. Such increase in market capital will provide the needed funds for investors sentiment and Money

supply on stock return in Nigeria and further investments and hence increased stock return in Nigeria.

v. The positive impact of investors' sentiment and money supply on stock return in Nigeria and a number of deals in the market also calls for proper policies to be implemented so as to attract more investors to invest on the stock market.
vi. There is also need to relax some stringent registration and operating procedures to enable more investors' and organizations to participate in the stock market in Nigeria.
vii. Finally, there is also need to institute policies that would further increase the value of investors' Sentiment and money supply on stock market returns in Nigeria. As stated earlier there is need to remove hindrances on the part of prospective investors so as to increase both the volume and value of transactions in the market. An increase in the value of transaction would in turn lead to increase on stock returns and economic growth in Nigeria.

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