

# Equity and Reserve Investment Funds on Capital Market Growth in Nigeria

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DOI: <https://dx.doi.org/10.47772/IJRISS.2024.801016>

Received: 09 December 2023; Accepted: 25 December 2023; Published: 24 January 2024

## ABSTRACT

The study of equity investment and capital market growth in Nigeria is motivated by the fact that capital market liquidity is relatively shallow and inefficient, preventing needed funds for investment. This study examines the extent to which Equity Investment influences Capital Market Growth in Nigeria by analyzing reserve investment funds and equity investment funds. The data is secondary from Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics (1999 to 2022) and ex-post facto research design, time series was adapted. ARDL was used for the analysis. The findings revealed that equity investment funds have positive and significant effect, while a reserve investment fund is negative and insignificant on Capital market growth in Nigeria. The study concludes that equity investment funds stand out to be an effective tool for capital market growth. Therefore, it recommends that authorities should encourage and apply all necessary tools for equity investment funds diversifications via policies to promote greater penetration on the part of institutional equity investors, Create informal equity investment in Nigeria due to thorny challenges derive from assessing finances.

**Key words:** Equity Investment, Capital Market, Growth, Funds, Reserves, Share Index.

## INTRODUCTION

Liquid capital markets are essential for the efficient allotment of capital. Odhiambo (2019) opined that Market Liquidity is another word for Equity Investment. Liquidity is typically the market's ability to absorb large amount of trades without causing excessive price movements (Meryers 2001). Capital market helps government in their projects handling and firms to raise long-term funds for expanding and modernizing industrial and or commercial purposes as asserted by (Gale, 2011). Capital market growth in this study is enhanced by application of efficient, effective and economy of equity funds and reserve funds. Investment Funds derives from institutional and or private investors are on the increase (Tamplin, 2023). This is due to Foreign Direct Investment, Foreign Portfolio Investment galvanized amidst equity funds inflows into capital market in Nigeria (Temitayo *et al.*, 2019). Equity investment speaks to the sale or trade of share on capital market. This study is optimistic that equity investment funds makes capital market liquid and this can be done through the input of reserves funds from variety of sources such as government foreign reserves, firm's capital reserves, pension reserves and many more. This study focus on utilizing Equity investment funds, reserve investment funds with inflation rate as control variable. A reserve funds facilitate to mitigate financial risks and uncertainties by having a cushion of funds set aside by individuals and organizations to better handle sudden financial shocks or downturns. It reduces the risk of falling into debt or defaulting on obligations due to unforeseen expenses (Kwode, 2015). The contribution of reserve investment funds to capital market growth is shown in the study of (Gale 2011, Tamplin 2023, Kwode 2015 and Ilugbemi 2020). Kwode (2015) and Ilugbemi (2020) studied emphasized that government reserves is utilized through purchases of substantive assets with medium and long term maturities in an effort to drive down illiquidity

ratio, boost capital market and also combat financial crisis. Kwode (2015) asserts that a developed capital market reduces liquidity shocks, thereby enhancing the productive capacity of an economy. The importance of the capital market to economic growth has also been emphasized by (Agarwal 2001).

An active capital market, according to Ilugbemi (2020) is an indication of a developed financial system and liquidity efficiency. Tharawanji (2007) opined that countries with liquidity efficiency, deeper financial capacity has capital markets with less severe business cycle output contraction and lower chances of economic down turn compared to those with less developed capital markets. The study presented in respect to equity investment as a tool to capital market growth is debated by many researchers and scholars as in case of Vladmiret. tal (2012) that the finding opted for the positive long and short run significance effect on equity investment funds to capital market growth. Unlike Ishaya and Abduljelel (2014) having different findings stipulating negative, insignificant effect on the capital market growth. The motivation is born out of the fact that there is an inadequate equity finances and its operations of the Nigerian capital market that leads to growth. The bond market is relatively shallow, inefficient and illiquid, thus, preventing companies from raising funds needed to expand investment in physical and human capital among other goals. Overall, the current study fills identified gaps and contributes to knowledge by assessing the level of financial diversity and depth to capital market growth in Nigeria,

The problem statement is the fact that market capitalization of equity market in Nigeria is low, thus the need for financial deepening into the market to permit growth is urgent; unlike emerging market counterparts especially the Asian and Latin markets, the local equity market in Nigeria is far below in performance due to liquidity shallowness, inexistence of decisive institutional investors, and lack of proper infrastructure, few listed firms in the Nigerian bond market relative to those of other emerging bond markets in Asia or Latin America. This view was shared by Cassimonet.al (2015), Ishaya and Abduljelel (2014), Corrado (2011) that noted the difficulty of local currency bond markets (LCBMs) policies to grow its investment size and basic financial market infrastructure. In addition, the underdeveloped nature of the Nigerian financial system relative to those of the developed countries coupled with the high level of inflation in the system is a plausible reason for the low volume of equity investment bonds in the country. Thus, Temitayoet.al (2019) confirmed that in developed economies like United Kingdom, United State of America, Russia and others having financial system well managed and inflation level well-curtailed, there abound vast volumes of equity investment bonds to explore to have financial liquidity.

The presence of a weak institutional framework, corruption and macroeconomic mismanagement inhibit the development of the equity bond market in Nigeria. It deprives the market with sufficient liquidity. The implementation of Equity Investment for Capital market growth galvanized and improves the growth of the market for efficient and effective Equity Investment, is core motivation behind the study. To determine the extent to which Equity Investment influences the Capital market growth in Nigeria, statement of Hypothesis is articulated as follows:

Ho<sub>1</sub>: Reserve investment funds have no significant effect on All Share Index in Nigeria.

Ho<sub>2</sub>: Equity investment funds have no significant effect on All Share Index in Nigeria.

## LITERATURE REVIEW

### Conceptual Framework

#### Equity Investment Index

Equity investment, speaks to the sale or trade of shares in a public company on the capital market. However, the new capital that results from equity investment can come from a variety of sources that typically range

from “silent investors” who buy shares in the company purely as an investment opportunity to “active / strategic investors” who wish to become partners in the company and participate in its management activities. Fundamentally, equity investment is intended to expand a company’s capabilities to produce or finance new activities, in order to support its growth. Equity should not be used to finance projects; unless of course a project has a very high level strategic goal and a scope whose outcome will greatly enhance the size and standing of the company. Simply put, equity investors part with their money when they see a potential to recoup their capital investment and make a profit; there fore, the investors will expect their investments to result in business growth (Corado, 2011). Equity investment by private investors in small to medium-sized enterprises (SMEs), known as informal direct investment, has been of interest to many economic researchers and some governments. One reason is that the supply of funds to SMEs from other financiers may be restricted due to relatively high transactions costs. Just as investing in a bond-focused mutual fund or equity trust funds (ETF).

### **Reserve Investment Index.**

Marketable securities like government bonds, treasury bills, and money market funds are often included in a reserve fund. These securities are easily traded in the market and can be converted into cash on short notice (Woubet 2022). They offer a higher return than cash while still maintaining a high level of safety and liquidity. However, their value can fluctuate with changes in interest rates, so they carry some level of risk. Jagjit (2011) states that, a capital reserve is not useful when a company needs to pay dividends; they are permanently separated from other accounts, usually through investment. An accumulated capital surplus such as profit and appreciation of the current market value of a company’s asset make up a capital reserve. Federal Reserve fund faced the challenge of how to further ease the stance of monetary policy as the economic outlook deteriorate or progresses. The Federal Reserve would respond in part or whole by purchasing substantial quantities of assets with medium and long maturities in an effort to drive down illiquidity rates, particularly at longer maturities. Odo (2016) opined that reserve securities undertake other important initiatives to combat financial crisis and build in capital markets through equities reserves. It launches a number of facilities to relieve financial strains at specific types of institutions and in specific markets. Gale (2011) shows that, given risk aversion, the market cannot supply sufficient liquidity to the financial system. This is because there is an incentive for savers to swap illiquid assets for liquid assets, which will leave the market as a whole short of liquid assets and long illiquid assets. The problem will tend to be exacerbated if there is a collapse in confidence in the interbank market, when distributional shocks to banks no longer get recycled around the system. Monetary authorities can offset this liquidity shortage by issuing short-term liabilities backed by fiscal transfers, ie interest bearing reserves or T-bills.

### **Capital Market Growth.**

Capital market is essential to financial system and industrialization, since it provides liquidity needed for financing not only firms, but also government programmes. Townsend and Ueda (2009) assert that financial sector is endowed with two summery functions leading to capital market growth, thus; Risk sharing and Efficiency gain in production/services. Capital market growth refers to its ability to effectively provide liquidity supply that enables execution of short and long-term projects with long-term payoffs, thereby endorse economic growth. Financial deepening through equity investment is that function of the capital market to avail listed firms access to sufficient and efficient liquidity supply. This study uses capital market growth as its dependent variable is proxy by all share index.

### **All Shares Index.**

All shares index refers to series of numbers which shows the changing average value of the share prices of all listed firms (Kwode, 2015). A market index is a quick measure to judge the overall direction of the market and the scope of its movements. An index can be representative of the entire market – like the SEG’s

all-share index – or just for a section – like tech stocks or top 100 most capitalized stocks only that the basis should be known. The SEG All-share Index is a total market (broad-base) index, reflecting a total picture of the behaviors of the common shares quoted on the Stock Exchange Group. It is calculated on a daily basis, showing how the prices have moved. It started in January 1984, the base year, with a value 00 and has now risen beyond the 7,000 mark at the end of 2022. Market Liquidity is another word for Equity Investment. Liquidity is typically the market's ability to absorb large amount of trades without causing excessive price movements. In addition, liquid markets are characterized by “narrow bid and ask spreads”, signifying that transactions are earned out in a cost effective manner. Liquidity determines the success of public offerings, reduces the cost and risk for underwriters and market makers. It also reduces the cost for investors via ensuring lower volatility and transaction cost from the macro perspective, liquid capital markets are essential for the efficient allocation of capital, which results in lower cost of capital for issuers.

### **Inflation Rate**

Inflation remains one of the major economic variables that can distort economic activities in both developed and developing countries. Although it has been argued that moderately rising prices (single digit inflation) initially activates the level of economic activities according (Adeoye, 2002), but persistent inflation is however a distress to capital market growth in Nigeria. Thus, understanding the factors driving inflation is very vital for the formulation and implementation of appropriate macroeconomic policies (Adeoye 2002). The maintenance of price stability is one of the principal objectives of macroeconomic management. Johnson (2017) maintained that inflation is generally and conveniently defined as a sustained trend in the general price level. In Nigeria, the Federal Office of Statistics has the primary responsibility of computing inflation rate.

### **Empirical Review**

Ilugbemi, *et.al* (2020) studied foreign portfolio investment and capital market growth in Nigeria from 1990 to 2017. Using secondary data from the CBN statistical bulletin, Auto regressive Distributed Lags (ARDL) is used to estimate both short and long-run dynamic relationships. The findings revealed that the coefficients of foreign direct investment (FDI), foreign portfolio investment (FPI) and exchange rate were positive but weak in predicting capital market while interest rate (INTR) maintained negative relationship with capital market. The residual diagnostic test carried out revealed that the residuals are serially uncorrelated and homoskadastic. Based on these findings this study concluded that foreign direct investment and foreign portfolio investment have insignificant positive effect on the capital market growth in Nigeria. It recommended that government should continue to formulate economic policy that would attract foreign investors into the country, introduce investment incentives and stimulus as well as put in place sound rules that guarantee efficient performance of the Nigerian capital market so as to woo more investors into the market. This study by way of critic, concentrate only on foreign direct, portfolio investments and interest rate to test the growth of capital market in Nigeria in 2020. Since the result is not favourable and had to make its interpretation with coefficients, further study is needed to test the data and interpret using the probability value in the findings.

Odhiambo (2019) conducted a study on Liquidity and capital market growth in South Africa. The study examined the causal link between Liquidity and capital market growths in South Africa as an objective; it's a secondary data, using Auto regressive Distributed Lag (ARDL) Bounds test technique. The finding reveals evidence of causal effect of Liquidity and capital market growth. Also, this shows how capital market growth aid economic growth through liquidity and trade openness leading to industrialization. Quoted firms reverberate due to financial deepening in the capital market in South Africa. The study concludes that Liquidity in capital market growths in South Africa is possible, and recommends that when foreign direct investment, financial liberalization is efficiently and effectively put to use with good business friendly policies in place. This study look into liquidity which is the energy of capital market development, as such it



need to be domiciled in the Nigerian capital market to find out whether the model can be applicable using statistical data upto 2023.

Juan (2019) studied pension reserve funds and capital market growth with the objective of Pension Reserve Funds equity in Selected organization for economic cooperation and development (OECD) Countries using secondary and primary data. The OECD reserve funds surveyed show relatively high levels of governance and investment management, but differences occurs across countries in governance and investment management practices. The study shows that selected countries are partly prefunding their otherwise pay-as-you-go (PAYG) financed social security systems through pension reserve funds (PPRFs) and capital market investment. Again, the study findings thus OECD countries have put in place internal and external governance mechanisms and investment controls to ensure the sound management of these reserve funds and better isolate them from undue political influence. In conclusion, these structures and mechanisms are in line with OECD standards of good pension reserve fund investment management. In particular, the requirements of accountability, suitability and transparency are broadly met by these reserve funds. In the recommendation enhancing the expertise in the funds' governing boards and constraining discretionary interventions by government are reforms. Such reforms will ultimately raise the long-term investment performance of the funds and the solvency of social security systems that would boost capital market liquidity. The efforts of OECD cannot be tide up to a single nation considering differences investment and governance policies rule of law and level of corruption. This study is in the right direction with the interest of boosting capital market growth by using pension reserve components. Therefore, further research is to be done using additional statistical data of up-to 2023.

Shinobuet.al (2018) studied capital inflows in developing Nations, the objective is on quality of domestic markets. Panel OLS technique was used to test the countries emerging markets over the medium term. The result shows that when more developed domestic financial market increases in growth, the more volume helps reduce the volatility of capital flows to emerging markets. Although growth is the primary determinant of the level of capital inflows, equity market liquidity and financial openness. Financial openness, business friendly policies helps attract capital inflows. The conclusion moreover, shows that financial openness is associated with lower capital inflow volatility. The recommendation points to the advantages of focusing on the medium-term goal of improving the quality of domestic financial markets. The findings drawn from multiple nations point to the fact that lack of financial openness; investment friendly policies are not eligible for the growth the capital market needs in the developing Nations. The variables considered focus on the improving the quality of domestic financial markets. However, the study needs to be narrowed down to Nigerian contest to respect the business and capital market policies in Nigeria.

Odoet.al (2016) studied portfolio investment inflows on capital market in Nigeria. The object is to determine investment inflows on capital market growth in Nigeria from 1986 to 2014 by using co-integration, vector error correction model and Granger Causality econometric tool. The results showed that the trace statistics indicates one (1) co-integrating equation at 5% level of significance, the vector error correction model indicates long-run significant impact of foreign portfolio investment on capital market in Nigeria, and concludes that the Granger Causality shows there is no causality between foreign portfolio investment and capital market growth. It recommended that Federal Government of Nigeria should strengthen and encourage the stock exchange group (SEG) to promote constant inflows of foreign portfolio investment to Nigeria for liquidity efficiency in the capital market in Nigeria. This study focuses on impact of foreign portfolio investment inflows on capital market. This is considered part of equity investment and it is conducted in 2016 which is superseded. It is therefore need to be updated to 2023.

Okoye et.al (2016) studied capital market development and the economy in Nigeria. The objective is to investigate the relationship between capital market and economic growth over the period 1981-2014.

Employing the econometric methodology of the vector error correction model, the study shows that in the short-run, market capitalization ratio and turnover ratio have significant negative effect on GDP. The study also shows positive effect of value traded ratio as well as negative effect of inflation rate on GDP though not significant the exogenous variables have significant negative impact on GDP and that changes in market capitalization ratio, value traded ratio and turnover ratio produce changes in GDP. With an adjustment speed of about 91.12 per cent, the model presents an inherent capacity to overcome short-run disequilibrium. The Granger causality test shows evidence of causal impact of market capitalization ratio, value traded ratio and turnover ratio on aggregate national output. The study further shows uni-directional causality from GDP to inflation. In conclusion, the study further established that capital market development constitutes a significant determinant of economic growth in Nigeria. This study seems well conducted but did not proffer recommendations for way forward. Therefore further study need to be conducted to fill the gaps of not only the loopholes but also the time gap created by this study.

Ishaya and Abduljeleel (2014) observed that debt is negatively related with profitability but equity is directly related with profitability. They did a study to examine the capital structure and profitability of the Nigerian listed firms from the agency cost theory perspective. Firms' panel data from 70 out of population of 245 firms listed at the Nigerian securities exchange for the period 2000 – 2009 were used and analyzed using fixed-effects, random-effects and Hausman Chi Square estimations. Their findings found that there was a significant negative effect of debt and profitability but no effect on firm value. This study concentrates only on firm value and not capital market growth as a whole. Taken from the fact that it was conducted since 2014, further study is required to bridge the gap of time and others.

Syed *et.al.* (2013) conducted a study on foreign capital inflows and market capitalization, with the objective to investigate the effect of foreign capital inflows and market capitalization in Pakistan for the period of 1976 to 2011. The study used auto regressive distributed lag (ARDL) bound testing co-integration approach. The result revealed that the proxies thus; foreign direct investment, workers' remittances and economic growth have significant positive relationship with the capital market capitalization both in long and short run effect. The conclusion refers to the fact that a foreign capital inflow increases the equity of the market capitalization. It recommended that foreign capital inflows be supported and encourage with business friendly environment policies in Pakistan. The critic of the study refers to the facts that an update is required since it was done since 2013. Again, the study needs to be domiciled in Nigeria.

Vladimir, *et.al* (2012) studied capital market growth and foreign direct portfolio in Croatia, the objective is to examine the long and short run effect on capital market growth and foreign direct portfolio in Croatia using a co-integration and regression analysis with eview9 statistical tool. The findings revealed positive relationship between the capital market indicators and foreign direct portfolio in Croatia. The study concludes that foreign portfolio investment contributes to the growth of capital market in Croatia. The recommendation is that efficient and effective capital market growth is certain with proper business policies towards encouragement of foreign direct portfolio in Croatia. The study was done since 2012 and conducted in Croatia far away from Nigeria. Therefore, a time and geographical gap is created and needs to be filled.

Jagjitet.al (2011) Studied reserves, liquidity and money in Nigeria. The objective is the analysis of reserves, liquidity and money assessment that stimulate the responses of Federal Reserve balance sheet to the crisis. The study examined the role that reserves for bond and capital swaps play in stabilizing not only capital market, but also the economy, as well as the effect of changes in the composition of the central bank balance sheet using auto regressive distributed lag (ARDL) bound test. It finds out that reserve investment policies can significantly enhance the ability of the central bank to stabilize capital market and the economy in both the long and short run. This is because balance sheet operations supply (remove) liquidity to a financial market that is otherwise short (long) of liquidity, and hence allow other financial spreads. The study made conclusion that reserves, liquidity and money effective, efficient policies simulate bond and capital swaps in

stabilizing capital market and the growth of the GDP in Nigeria. The study recommended that financial market booms amidst stabilizing bond and capital swaps through reserves, liquidity and money supply good policies would better the equity bonds in the market. It is worthy to note that research conducted in 2011 desires update and to especially focus not only reserves but capital inflow from foreign investors through Foreign Direct Investment, Foreign Portfolio Investment.

## **Theoretical Review**

### **Efficient Market Hypothesis Theory.**

This is known as random walk theory Markowitz and Fama (1965) it is one of the theoretical exploits of capital market growth. EMH stipulates that market or equity prices should incorporate all available information at any point in time, and explains that current stock prices fully reflect available information about the value of a firm, and there is no way to earn excess profits (more than the market overall), by using this information which has very important implications for investors as well as for financial managers. The relevant test of efficiency is whether prices incorporate all information that is available at the time. It promotes and advises that it is not necessary for speculators to rely exclusively on the usual risks and market return of one individual stock. In the event of growth, a financial expert will win by placing money into multiple stocks by decreasing the risks in the given portfolio. Consequently, this theory aims to quantify the effects of change and growth of listed firms and the overall growth of the capital market in Nigeria.

### **The Internalization theory.**

The theory was initially put forward by Coase in 1937. Hennart (1982) further developed the idea of internalization by offering models between the two types of integration: vertical and horizontal. The Internalization theory tries to explain the growth of transnational companies and their motivations for achieving foreign direct investment. Under this arrangement, transnational companies organize their internal activities so as to develop policies and strategies for maximum advantage to the transnational companies. This theory has also provided explanations on the growth process not only on the capital market but also in an economy were largely used in the literature to explain how FDI and FPI influence growth.

### **Pecking Order Theory.**

The pecking order theory propounded by Myers (1984) posit that in designing quoted firms capital structure for growth, businesses should first use internally generated funds, followed by external debt and finally the external equity. However, the equity investment funds are accessible to the quoted firms by means of capital market. Therefore, the theory supports efficient and effective capital market liquidity for industrialization. This theory was support by the work of Zachary *et.al* (2019). This study is anchored on the pecking order theory fundamentally because of the application of internally generated funds/ revenue and due to its inefficiency, external debt and external equity are sort after for maximum financial deepening and growth. As such, pecking order theory supports the development and growth of capital market not only in Nigeria, but internationally. Moreso, it focuses on the ability of quoted firm's capital structure growth for industrialization through capital market growth and its liquidity efficiency in Nigeria.

## **METHODOLOGY**

The research design is ex-post facto and this investigates what caused variations among variables in which there is no control of the variables. The study focus on capital market sector of the economy as its population in Nigeria and all share index, as proxy for the capital market. The study employed secondary

source, time series data from CBN Statistical Bulletin, and National Bureau of Statistics covering 1999 to 2022. Here, the data are log due to the status of the data generated in difference formats, such as in percentages and volume of currency. That is, Dollar and Naira.

### 3.1 Model Specification

Adapted model from Lambeet.al (2021):  $GDP = + \alpha + \beta_1 TVS + \beta_2 MCAP + \mu \dots 1.1$

$$ASI = L\beta_0 + L\beta_1 RIF + \text{Log } \beta_2 EIF + \text{Log } \beta_3 INFR + \mu \dots (1.2)$$

Where: LASI = Log of All Share Index

LRIF= Log of Reserves Investment Funds

LEIF= Log of Equity Investment Funds

LINFR = Log of Inflation Rate

$\beta_0$  is the intercept of the regression model of Log of All Share Index.  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$  are change of the Equity Investment Funds variables with respect to All Share Index.  $\mu$  = is the stochastic error term associated with the model of the Equity Investment Funds variables. The a priori expectation is that  $\beta_1$ ,  $\beta_2$ , and  $\beta_3 > < 0$  indicating a positive or negative relationship between Reserves Investment Funds, Equity Investment Funds, Interest rate, and All Share Index in Nigeria; that is increase/decrease Reserves Funds, Equity Investment Funds, Interest rate in Nigeria will lead to decrease/increase in All Share Index. Re-writing equation (1.1) in general form to capture the dynamic relationship among the variables as:

$$\Delta LASI = \alpha_0 + \sum_{g=1}^l \alpha_{1i} \Delta LASI_{t-i} + \sum_{h=1}^m \alpha_{2i} \Delta RIF_{t-i} + \sum_{i=1}^n \alpha_{3i} \Delta LEIF_{t-i} + \sum_{j=0}^o \alpha_{4i} \Delta LINFR_{t-i} + \varepsilon_t \dots (1.3)$$

Therefore, equation (1.3) was used to estimate and analyze the short-run effects of Reserves Investment Funds on the growth of Nigerian capital market. However, from equation (1.3),  $\Delta LASI_{t-i}$  is the lag 1 of the Log of the dependent variable. The following are the independent variables:  $\Delta LRIF_{t-i}$  is the lag of the Log of Reserves Investment Funds;  $\Delta LEIF_{t-i}$  is the lag of the Log of Equity Investment Funds; and  $\Delta INR_{t-i}$  is the lag of the Log of the Interest rate.

Table 1: Variable Measurement

S/NO	VARIABLES	ACRONYM	TYPES	MEASUREMENT	SOURCE
1	All Share Index	ASI	Dependent Variables	Sum of all the prices of stock which are part of index divided by number of stocks in the index	John, Adewale A. (2022)
2	Reserves Investment Funds	RIF	Independent Variables	Measured by using the Reserve fund performance Index	Okoye et.al (2016)
3	Equity Investment Funds	EIF		Number of funds that increase their holdings of assets	Odhiambo (20019)
4	Inflation Rate	INF.R	Control Variable	Inflationary rate flexibility and economic growth measurement	Woubet (2022)



## Descriptive Statistics

Descriptive statistical analysis is usually conducted on the data collected for a study in order to have an idea on the nature of the data. This study therefore is conducted and has the descriptive statistics to have a glimpse on the nature of the data collected.

**Table 2: Descriptive Analysis**

### Descriptive Analysis

	ASI	RIF	EIF	INFR
Mean	345836.5	550.0521	370.8004	12.14208
Median	324656.1	370.0150	339.0400	11.94000
Maximum	783432.0	1784.250	1039.770	23.80000
Minimum	87390.00	31.45000	4.110000	0.200000
Std. Dev.	169118.7	517.0763	319.5630	4.585008
Skewness	0.626720	1.121640	0.532662	0.002084
Kurtosis	3.293049	3.335807	2.289643	4.438875
Jarque-Bera	1.656988	5.145074	1.639523	2.070378
Probability	0.436707	0.076342	0.440537	0.355159
Sum	8300076.	13201.25	8899.210	291.4100
Sum Sq. Dev.	6.58E+11	6149463.	2348771.	483.5128
Observations	24	24	24	24

Source: Researchers Computation (E-view 10) 2023

The descriptive statistics table above includes the variables of the study, mean, median, standard deviation; skewness and kurtosis, observations of the data used in the study are hereby presented for analysis. The series of 345836.5 is the mean value of All Share Index within the period of the study with median value of 324656.1. The ASI shows a standard deviation from the average mean of 169118.7 which showed disparity from the mean. The skewness is 0.626720 and kurtosis is of positive 3.293049. The maximum value of capital market growth as well as its minimum value within the period of study is 783432.0 and 87390.00.

The Reserve investment funds (RIF) shows an average mean value of 550.0521 with median of 370.0150. The deviation from the average means which is standard deviation is 517.0763. The skewness of RIF is 1.121640 and kurtosis is 3.335807. The maximum value of RIF is 1784.250. While the minimum is 31.45000. Equity investment funds (EIF) shows the mean value of 370.8004 with the median of 339.0400. The deviation is 319.5630. The skewness is 0.532662 and kurtosis is 2.289643. The maximum, minimum values are 1039.770, 4.110000. This means that the maximum value added by equity investment funds on the capital market is 1039.770 while its minimum value within the period of study is 4.110000.

However, the Mean average Inflation Rate (INFR) indicates 12.14208 and the standard deviation 4.585008. This mean that average mean and deviation are not normally distributes because they have wide disparity. The median is 11.940000 while the skewness of 0.002084 with kurtosis of 4.438875. The maximum value of the Inflation Rate (INFR) is 23.80000 while the minimum value is 0.200000 as the corresponding value.

### 3.3.2 Table 3: Correlation Matrix.

#### Correlation Result

Covariance Analysis: Ordinary				
Date: 07/10/23 Time: 10:50				
Sample: 1999 2022				
Included observations: 24				
Correlation				
Probability	LOGASI	LOGRIF	LOGEIF	LOGINFR
LOGASI	1.000000			
	—			
LOGRIF	0.793156	1.000000		
	0.0000	—		
LOGEIF	0.842512	0.918305	1.000000	
	0.0000	0.0000	—	
LOGINFR	0.331386	0.354194	0.254011	1.000000
	0.1137	0.0895	0.2310	—

Source: (E-view 10) 2023

This table present the spearman correlation coefficient between the variables involved in this study. Equity Investment (RIF, EIF and INFR), which is insignificant and positively associated with capital market growth represented by All Share Index (ASI) in Nigeria. Significant positive relationship between All Share Index (ASI) and Reserve Investment Fund (RIF); also, there is a strong and a significant positive relationship between All Share Index (ASI) and Equity Investment Funds (EIF); going by the p-value, the control variable inflation rate is also insignificantly positive with All Share Index (ASI).

#### Unit Root Test

The study starts by examining the sationarity of the data used for this research study (the existence of unit roots) in the econometric. The stationarity test for variables used in regression analysis is usually used in the unit root test. If the variable’s mean and variance are constant, the data is said to be stationary. If one of them varies, though, it suggests that the data has a unit root. The value of the stationarity of time series used in regression, as Gordon (2017) puts it, disturbs the fact that a non-stationary time series cannot be extended to other time intervals other than the current. This makes it of no practical benefit to predict dependent on these time series. Furthermore, regression investigation conducted without subjecting the data to unit root test may be hazardous or spurious because the estimated parameters would be bias and inconsistent. To avoid this, tests were conducted using the ADF statistic to investigate Unit root presence.

**Table 4: Summary ADF Unit Root.**

ADF Unit Root Test for the series of ASI, RIF, EIF and INFR

VARIABLES	Lags	T-statistic	5% critical value	P-Value	Integrated order	Remarks
ASI	0	-2.092133	-3.004861	0.2493	—	Not Stationary
	1	-4.282561	-3.012363	0.0034*	I (1)	Stationary
RIF	0	-1.432438	-3.020686	0.5458	—	Not Stationary

	1	-3.674074	-3.029970	0.0138*	I (1)	Stationary
<b>EIF</b>	0	-3.626846	-3.029970	0.0153*	I (0)	Stationary
<b>INFR</b>	0	-4.840167	-2.998064	0.0008*	I (0)	Stationary

Source: (E-view 10) 2023

The Unit root result presented in summary, indicated in table 4 above is mixed of I(1) and I(0). The result of the variables thus: all share index (ASI) with p-value of 0.2493 is not stationary at level, the reserve investment funds (RIF) with p-value of 0.0034 is stationary at level. However, equity investment funds (EIF) with the p-value of 0.0153 is stationary at 1<sup>st</sup> deference while the Inflation Rate (INFR) displayed in the table shows the p-value of 0.0008 indicating stationary at 1<sup>st</sup> deference.

### 3.3 Co-integration ARDL Test

Having established that the variables are an admixture of I(0) and 1(1) orders of integration. The Auto Regressive Distributed Lag (ARDL) bounds test for co-integration was carried out.

Co-integrating Hypothesis:

$H_0$ : There is no long-run relationship

$H_1$ : There is long-run relationship

Table 5: Johansen Co-integration Test

Date: 07/10/23 Time: 11:30				
Sample (adjusted): 2001 2022				
Included observations: 2-2 after adjustments				
Trend assumption: No deterministic trend				
Series: LOGASI LOGRF LOGEIF LOGINFR				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.885601	70.18726	40.17493	0.0000
At most 1	0.485077	22.48980	24.27596	0.0826
At most 2	0.263201	7.887584	12.32090	0.2455
At most 3	0.051702	1.167907	4.129906	0.3262
Trace test indicates 1 cointegratingeqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.885601	47.69745	24.15921	0.0000
At most 1	0.485077	14.60222	17.79730	0.1420
At most 2	0.263201	6.719677	11.22480	0.2749

At most 3	0.051702	1.167907	4.129906	0.3262
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: (E-view 10) 2023

The Trace test statistics in Table 5 indicates that the hypothesis of no co-integration,  $H_0$ , among the variables can be rejected. The Trace test results revealed that three co-integrating vectors exist among the variables of interest. However, the Max-eigenvalue test indicates no co-integration at the 0.05 level. Thus, one has a case of conflicting results between the two tests. The study thus adopts the conclusion made by Trace test which shows that four co-integrating vectors exist among the variables of interest. Since the variables are co-integrated, there is, a relationship among the variables. It also means that one can proceed to estimating the ARDL (Bound Test).

Table 6 ARDL Bounds Test for long and short run effect.				
Dependent Variable: D(LOGASI)				
Selected Model: ARDL(1, 0, 0, 0)				
Case 2: Restricted Constant and No Trend				
Date: 07/10/23 Time: 11:24				
Sample: 1999 2022				
Included observations: 23				
F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	1.806442	10%	2.37	3.2
K	3	5%	2.79	3.67
		2.5%	3.15	4.08
		1%	3.65	4.66
<b>Source:</b> (E-view 10) 2023				
Actual Sample Size	23		Finite Sample: n=35	
		10%	2.618	3.532
		5%	3.164	4.194
		1%	4.428	5.816
			Finite Sample: n=30	
		10%	2.676	3.586
		5%	3.272	4.306
		1%	4.614	5.966

From the co-integration test captured in table above, it would be seen that F-statistic value of 1.806442 is less than the lower I(0) and upper bound I(1) critical values of 2.79 and 3.67 respectively at the 5% significance level. It can therefore be inferred that the variables are not co-integrated, and as such, there is a short-run relationship between equity investment variables and capital market growth between 1999 and 2022. Thus, the null hypothesis of no long-run relationship is not rejected at the 5% significance

level among the variables of interest. Considering the co-integrating relationship between equity investment and capital market growth in Nigeria, proxy by all share index and equity investment funds, reserve funds investment. The study proceeds to estimate the regression analysis to determine the probability values and the general coefficient using f-statistics using ARDL as indicated in table seven below;

3.2 Table 7 Ardl Regression Result

Dependent Variable: LOGASI				
Method: ARDL				
Date: 07/10/23 Time: 11:20				
Sample (adjusted): 2000 2022				
Included observations: 23 after adjustments				
Maximum dependent lags: 1 (Automatic selection)				
Model selection method: Akaike info criterion (AIC)				
Dynamic regressors (0 lag, automatic): LOGRF LOGEIF LOGINFR				
Fixed regressors: C				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOGASI(-1)	0.492997	0.219598	2.245001	0.0376
LOGRIF	0.008978	0.142533	0.062987	0.9505
LOGEIF	0.191546	0.104988	0.871965	0.0397
LOGINFR	0.063923	0.075647	0.845010	0.4092
C	2.517622	1.099572	2.289639	0.0343
R-squared	0.747324	Mean dependent var		5.504908
Adjusted R-squared	0.691174	S.D. dependent var		0.219166
S.E. of regression	0.121795	Akaike info criterion		-1.183291
Sum squared resid	0.267013	Schwarz criterion		-0.936445
Log likelihood	18.60785	Hannan-Quinn criter.		-1.121210
F-statistic	13.30937	Durbin-Watson stat		1.509698
Prob(F-statistic)	0.000032			
*Note: p-values and any subsequent tests do not account for model selection				
Source: (E-view 10) 2023				

The result in table 7 above shows the coefficient of R<sup>2</sup> shows how well the model fits the sample data, and 0.747324 has been accounted by the model. This value implies that 74% of the variation in Capital Market Growth is explained by the independent variables of Equity Investment. Similarly when taken collectively the value of F-statistic is 13.30937 and the value of the probability of F-statistic is 0.000032.

In addition, Reserve investment funds (RIF) have negative effect with the p-value of 0.9505, Equity Investment Funds (EIF) with the p-value of 0.0397, **The control variable**-Inflation Rate (InfR) has p-value of 0.4092, which is higher than 5% has no significant effect on Capital Market growth. This result implies that the overall regression is positive and statistically significant at 5%. This fact confirms the goodness of fit implied by the R<sup>2</sup>; and shows that Equity Investment contribute to Capital Market growth in Nigeria. The Durbin-Watson statistic of 1.509698 is within the acceptable range of 1.5 to 2 for a sample of at least 22 observations. The result of hypotheses one, two shows not enough evidence to support the null hypotheses.



## Discussion of Finding and Test of Research Hypotheses.

### Hypothesis One:

***Ho<sub>1</sub>: Reserve Investment funds have no significant effect on Capital Market Growth***

Given the t-value of 0.062987 and P-value of 0.9505 in table 7 was found to have a negative effect and statistically insignificant since the P-value is higher than 5% significance level. Therefore, it suggests that null hypothesis one (H<sub>01</sub>) which states that Reserve Investment Funds has no significant effect on Capital Market Growth in Nigeria is not rejected. This means that in Nigeria, there is a high level need of other investment funds rather than Reserve investment funds to deepen the liquidity efficiency in the Capital Market in Nigeria. This is not intern dim with the work of Juan (2019) and Jagjit *et.al* (2011), stating that reserve investment funds and policies can significantly enhance the ability of the central bank to stabilize capital market growth.

### Hypothesis Two:

***Ho<sub>2</sub>: Equity Investment funds has no significant effect on Capital Market Growth***

Based on the t-value of 0.871965 and P-value of 0.0397 in table 7 means positive influence on the Capital Market Growth and this influence is statistically significant since the P-value is less than 5% significance level. It therefore suggests that null hypothesis two (H<sub>02</sub>) which states that Equity Investment Funds has no significant effect on Capital market growth in Nigeria is rejected. As such, there is a high level need of Equity Investment Funds to boost, deepen the liquidity efficiency, sufficiency and economy of the growth of Capital Market in Nigeria. This result is in agreement with the study conducted by Shinobu *et.al* (2018) and Odhiambo (2019) on liquidity equity capital having positive effect on the growth capital market

## CONCLUSION AND RECOMMENDATION

The study examined the effect of capital market growth in Nigeria using all share index, as proxy for capital market growth. The findings revealed that equity investment funds indicators in the study have both positive and negative significance. Thus: The result of Reserve Investment Funds has no statistical significant effect on Capital Market Growth in Nigeria. This means that in Nigeria, there is no need of reserve investment funds to deepen the liquidity efficiency in the Capital Market. This is not intern dim with the work of Juan (2019) and Jagjit *et.al* (2011), stating that reserve investment funds and policies can significantly enhance the ability of the central bank to stabilize capital market growth. However, in respect to Equity Investment Funds, it has positive and statistical significant effect on Capital market growth in Nigeria. As such, there is a high level need of Equity Investment Funds to boost, deepen the liquidity efficiency, sufficiency and economy of the Capital Market in Nigeria. This result is in agreement with the study conducted by Shinobu *et.al* (2018) and Odhiambo (2019) on liquidity equity capital having positive effect on the growth of capital market. The recommendation can be observed as indicated below:

1. Capital market regulators should apply all necessary tools and continue to encourage listing of private companies on the floor of capital market to enhance market growth in Nigeria, encourage and develop deep complementary markets for other investment funds rather than reserves funds due to the government involvements, investment securities; liquidity efficiency requires a coordinated effort along multiple dimensions. These include a supportive legal and regulatory environment, regulatory coordination to broaden the investor base market, robust and efficient market infrastructures such as central counter parties and trade repositories to manage potential financial stability risks in Nigeria.
2. Equity investment funds diversifications via policies to promote greater penetration on the part of institutional investors such as pension investment funds, sovereign investment funds and insurance can dampen volatility as well as create a domestic constituency that raises corporate governance

standards and the broader efficiency of capital markets. Moreso, Informal equity investment be promoted in Nigeria due to challenges drive from assessing finances. Australia Industry Commission (1997), assert that Informal equity investment is a significant source of finance for not only listed firms but to small business. The study survey indicates that in mid-1996 -2020, the total stock of equity provided to small firms by private investors was around \$1 billion.

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