Stock Market Capitalization and Pension Fund Assets' Perspectives of Financial Deepening in Nigeria (1981-2016)

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Abstract: *Stock market capitalization and pension fund assets' perspectives of financial deepening appeared neglected in current researches. Hence, this study examined these seemingly neglected areas. Secondary data were collected from Central Bank of Nigeria Statistical Bulletin, 2017and the Global Financial Development Bulletin, 2017 from 1981 to 2016. Ex-post facto research design was employed. Data were analyzed with Ordinary Least Square statistical technique. The results showed that stock-market capitalization to GDP had positive but no significant effect while pension fund assets to GDP had positive significant effect on economic growth in Nigeria. Based on the results of the study, it was concluded that pension fund assets to GDP had positive significant effect while stock-market capitalization to GDP had positive but no significant effect on economic growth in Nigeria. It was recommended, among others, that the Pension commission alongside other operators in the pension industry should work towards involving the informal sector in the Contributory Pension Scheme as this will reduce their exclusion from the financial system thereby extending the reach of the financial sector to the wider economy.*

Key words: *Stock market capitalization, pension fund assets, financial deepening, Nigeria, economic growth.*

1.0 INTRODUCTION

Different people have different expectations from the financial system around them all over the world. Hence, Claessen and Feijen (2006) stressed that a well-developed financial system enables firms to expand production and provides households with the ability to obtain essential assets like a house, insure against income shocks, start a company, receive cheaper remittances, and enjoy a pension when they retire. Furthermore, the financial sector is an engine of economic growth and household welfare. Nzotta and Okereke (2009) confirmed that financial market plays a vital role in the process of economic growth and development by facilitating savings and channelling funds from savers to investors. Financial intermediation leads to financial deepening, which refers to the greater financial resource mobilization in the formal financial sector and the ease in liquidity constraints of banks and enlargement of funds available to finance projects (Nzotta & Okereke, 2009).

Direct measurement of how well the financial sector performs each of its functions is difficult. Ndebbio (2004) noted that it is not possible to observe directly the quality and quantity of the monitoring services performed by a bank when it extends a loan, at least not for a large country like Nigeria. Hence, researchers use proxies to measure financial deepening. Common

indicators of financial deepening are ratio of M_2 (broad money supply) to GDP, ratio of private credit extended by commercial banks to GDP, and other financial assets. What is crucial here is what constitutes the financial assets that will be able to approximate financial deepening adequately. Borrowing a leaf from Ndebbio (2004) financial deepening simply means an increase in the supply of financial assets in the economy. Therefore, the sum of all the measures of financial assets gives us the approximate size of financial deepening. That means that the widest range of such assets as broad money, liabilities of non-bank financial intermediaries, treasury bills, value of shares in the stock market, money market funds, etc., will have to be included in the measure of financial deepening. Ndebbio (2004) noted that if the increase in the supply of financial assets is small, it means that financial deepening in the economy is most likely to be shallow; but if the ratio is big, it means that financial deepening is likely to be high. He went further to stress that developed economies are characterized by high financial deepening, meaning that the financial sector in such countries has had significant growth and improvement, which has, in turn, led to the growth and development of the entire economy. In Nigeria and other developing countries, financial authorities have embarked on many policies to strengthen the financial institutions in the country and improve the depth of their operations. These became necessary because, one common problem affecting the growth of developing economies is the issue of financial shallowness which is seen by many economists as an outcome of the adoption of inappropriate financial policy (Okereke, 2011).

Financial deepening is often understood to mean that sectors and agents are able to use a range of financial markets for savings and investment decisions, including at long maturities (access), financial intermediaries and markets are able to deploy larger volumes of capital and handle larger turnover, without necessitating large corresponding movements in asset prices (Kisaka, Adhiambo, Ndege and Muio, 2015). This is achieved when the financial sector can create a broad menu of assets for risk-sharing purposes. According to Nwaogwugwu (2008) financial deepening refers to the increased provision of financial services with a wider choice of services geared towards the development of all levels of society. The World Bank (2010) further contends that financial deepening encompasses the increase in the stock of financial assets. From this perspective, financial deepening implies the ability of financial institutions in general, to effectively mobilize financial resources for development. This view accepts the fact that a financial system's contribution to the economy depends on the quality and quantity of its services and the efficiency with which it performs them. The recent persistent deceleration of real GDP growth since the third quarter of 2014, despite many financial deepening efforts is of great concern which calls for a thorough investigation of the relationship between financial deepening and economic growth in Nigeria.

1.2 Statement of the Problem

In spite of the recent efforts to improve financial deepening in the country, it still appears heavily lopsided in favour of some indices. Some critical sectors of the economy appear not to be inviting or even interesting to core stakeholders, including researchers in this field. This, perhaps, accounts for the concentration of efforts and researches on preferred areas of interest to active investors in the financial industry (Igwebuike, Udeh & Okonkwo, 2019). Many people believe that since pension fund sub-sector concerns largely retired civil servants who may no longer be active in the financial system, it plays less important role. In as much as the individual retirees may not active in terms of physical disposition, their influences in investment decisions

remain paramount. Again, on the aggregate, the volume of fund available on the sub-sector makes all-time important.

Furthermore, as a result of ignorance on the part of average investors especially in developing countries, capital market utilization is abysmally low. This scenario is misconstrued by many to mean that capital market sub-sector of the financial system is not significant. Given the nature of finances that are sourced from the capital market, it would appear that this sub-sector is more investor- friendly than majority of other sources. It is against this background of abject neglect of these sub-sectors that this study is designed to provide complimentary information in relation to financial deepening. It specifically examined stock-market capitalization to GDP and pension fund assets to GDP as proxies and important arms of the financial industry in Nigeria

1.3 Objectives of the Study
The broad objective of this research is to examine the effect of financial deepening on economic growth in Nigeria. Specifically, the study intends to:
3. Assess the effect of stock-market capitalization to GDP on economic growth in Nigeria
4. Appraise the effect of pension fund assets to GDP on economic growth in Nigeria

1.4 Research Questions
The following research questions guided the study:
3. To what extent does stock-market capitalization to GDP affect economic growth in Nigeria?
4. To what extent do pension fund assets to GDP affect economic growth in Nigeria?

1.5 Research Hypotheses
The under-stated null hypotheses were formulated for the study:
H_{01}: Stock-market capitalization to GDP has no significant effect on economic growth in Nigeria.
H_{02}: Pension fund assets to GDP have no significant effect on economic growth in Nigeria.

1.6 Scope of the Study
The study considered financial market deepening from the perspectives of stock-market capitalization to GDP and pension fund assets to GDP from 1981 to 2016. Other usual and common indices of financial deepening were not considered.

2.0 REVIEW OF RELATED LITERATURE
2.1   Conceptual Review
2.1.1 Concept of financial deepening
Agbazie (2011) defined financial deepening as an effort aimed at developing the financial system that is evident in increased financial instrument/assets in the financial markets-money and capital markets, leading to the expansion of the real sector of the economy.

Financial deepening is a multi-faceted process that involves the interaction of a number of markets (primary, secondary and retail), instruments (deposits, loans, foreign exchange, bonds and debt securities) and stakeholders (banks, contractual savings institutions, companies). It can be defined as a process in which institutions and financial markets: i) facilitate goods and services exchange (e.g. payment services), ii) mobilize and pool savings of a large number of investors iii) acquire and process information about the companies and the potential investment projects and therefore allocating public savings to the most productive uses, iv) follow investments and exert corporate governance, and v) diversify and reduce liquidity risk and inter-temporal risk (Levine, 1997; King & Levine, 1993). In other words, financial deepening can be

understood as a process by which the range of products and players widens, deadlines extend and services play a role in risk coverage and diversification.

2.1.2 Financial Deepening Indicators According to (Ndebbio, 2004), economic growth and development of a country depends greatly on the role of financial deepening. He argued what is important is what constitutes the financial assets that wealth-holders must have as a result of high per capita income. It is only when we can identify those financial assets that we will be able to approximate financial deepening adequately. The widest range of such financial assets are broad money, liabilities of non-bank financial intermediaries, treasury bills, value of shares in the stock market, money market funds, etc. (Ndebbio, 2004). To simply pick the ratio of broad money (M2) to gross domestic product (GDP) as an indicator of financial deepening is not representative of any sector in the economy.

2.1.7   Pension and Economic Growth

Channarith and Wade (2010) observed that pension fund assets are growing rapidly and are increasingly providing a source of investment funds to their domestic financial markets. In Nigeria the value of investment of Retiree Funds' assets in quoted ordinary shares was N2.10 billion, accounting for less than 1% of total portfolio value. This was a reduction of N420 million from N2.52 billion as at 31 December 2015 (Pension Commission, PENCOM, 2016). Investment in ordinary shares of the Financial Sub-Sector accounted for 58% of equity investments, more than 44% in 2015 mainly due to market valuation. Other significant sectoral investments were in Consumer Goods (23%); Oil & Gas (8%); and Industrial Goods (8%). As at 31 December 2016, investments in Federal Government Securities (bonds and treasury bills) were valued at N306.82 billion and accounted for 78% of total RSA Retiree Funds, compared to N306.71Billion (73%) in 2015. Investment in Treasury Bills (TBs) amounted to N47.54 billion, which was an increase of N19.64 billion over N27.90 billion recorded in 2015. The value of investments in State Government Bonds reduced by N2.61 billion (12.73%) from N20.51 billion in 2015 to N17.90 billion as at 31 December 2016. The reduced value was partly as a result of the maturity and full redemption of bonds issued by Imo State. Investment in the bonds issued by Lagos State was the highest, with market value of N11.13 billion, which is equivalent to 62.21% of the value of total investments in State Government Bonds by Retiree Funds. Investments in Corporate Debt Securities were valued at N36.45 billion as at 31 December 2016, that is, 8% of total portfolio value and a growth in value of 54% above N23.67 billion as at 31/ December 2015 (PENCOM, 2016). It is seen that the pension industry has been making investments that affect the domestic financial markets. In this capacity the pension industry carries out the role of financial intermediary.

2.1.8   Capital Market and Economic Growth

According to Levine and Zervos (1998) the capital market is expected to encourage savings by providing individuals with an additional financial instrument that may better meet their risk preferences and liquidity needs. Better savings mobilization may increase the savings rate. Capital markets also provide an avenue for growing companies to raise capital at lower cost. In addition, companies in countries with developed stock markets are less dependent on bank financing, which can reduce the risk of a credit crunch. Stock markets therefore are able to positively influence economic growth through encouraging savings amongst individuals and providing avenues for firm financing.

The capital market contributes to economic growth through the specific services it

performs either directly or indirectly. Notable among the functions of the capital market are mobilization of savings, creation of liquidity, risk diversification, improved dissemination and acquisition of information, and enhanced incentive for corporate control. Improving the efficiency and effectiveness of these functions, through prompt delivery of their services can augment the rate of economic growth (Okereke-Onyiuke, 2000).

2.2 Theoretical Review

2.2.1 Demand-following finance growth Theory

One of the most prominent writers in the finance growth nexus is Hugh Patrick. In his seminar paper, Patrick (1966) asked a critical question, which sector, financial or real, leads in the dynamic process of economic development? Patrick made a theoretical contribution which identified two possible patterns in the causal relationship between financial development and economic growth. In the first, growth induces an expansion of the financial system. According to this view, which in his words he termed as "demand-following," the lack of financial growth is a manifestation of the lack of demand for financial services by the real sector. Hence, he asserted that the creation of modern financial institutions, their financial assets and liabilities, and related financial services is in response to the demand for these services by investors and savers in the real economy. In this case, the evolutionary development of the financial system witnessed in developed countries is a continuing consequence of the pervasive, sweeping process of economic development. As the real side of the economy develops, its demands for various new financial services materialize, and these are met from the financial side. In the second pattern of the thesis, the expansion of the financial system precedes the demand for its services (Atan & Obioesio 2015). Channeling scarce resources from (small) savers to (large) investors according to relative rates of return, the financial sector precedes and induces real growth. The deliberate establishment and promotion of financial institutions in many less developed countries (LDCs) might reflect this belief in the "supply-leading" relationship between the two developments.

A natural question then concerns the direction of causality between financial development and economic growth. Patrick (1966) asserted that the direction of causality changes over the course of development. In his view, financial development is able to induce real innovation-type investment before sustained modern economic growth gets under way, and, "as the process of real growth occurs, the supply-leading impetus gradually becomes less important, and the demand-following financial response becomes dominant. Unfortunately, there has been scanty quantitative evidence on this subject drawing on actual data of both developed and developing countries.

2.2.3   The Mckinnon-Shaw Theory

The intellectual framework for financial deepening/development efforts in developing countries in the 1980s was provided by the works of Mckinnon and Shaw (1973).

The postulation of this theory or paradigm is that financial deepening occurs with high interest rates, credit expansion and removal or reduction in statutory reserve requirement (SRR). It advocates financial liberalization policies in order to achieve economic objectives particularly in the developing countries.

In a more detailed explanation, the Mckinnon-Shaw (1973) paradigm contained two essential issues; (1) the financial sector is critical for economic growth and (2) extensive government controls imposed on the financial sector prevents financial deepening and impedes the contribution of the sector to development. The first issue was not all that new, but only

reiterated and re-affirmed ideas contained in the works of earlier writers such as Gurley and Shaw (1955), Patrick (1966) & Goldsmith (1969) all cited in (Andabai & Igbodika, 2015). The second issue was innovative, with the M-S thesis systematically detailing the efficiency and output costs associated with direct state intervention in the financial system labelled "financial repression". However, the general notion from their debate is that developing countries have repressed economies with ceiling on interest rates and limitations in credit availability which imposes restrictions on growth. The way out of this therefore, is for the developing countries to increase the availability of funds by removing restrictions in the financial sector. This study is anchored on this theory because its' two afore-mentioned arms which are central to this study.

2.3 Empirical Review

Farabiyi (2016) provided evidence on the effect of the operation of the funded pension scheme since its inception in 2004 on economic growth in Nigeria using error correction mechanism (ECM) and Ordinary Least Square (OLS) methodologies. The findings revealed that the pension fund contributions from both private and public sectors in Nigeria increased greatly and constituted a huge investment fund in the capital and money markets. This increased the liquidity in the economy and created employment opportunities as well as improvement in the investment climate. The study concluded that with good risk and portfolio management by pension fund administrators and custodians, the contributory pension has the capacity to boost the Gross Domestic Product (GDP) in Nigeria and very convenient to retirees compared to the previous defined benefit scheme. The study however recommended the removal of delay payment, administrative bottlenecks and corruption in the management of the pension fund in order to boost economic growth in Nigeria.

Micah and Obah (2016) investigated the relationship between pension fund administration and infrastructure financing in Nigeria. The study answered four research questions and also tested four hypotheses. Correlation was used as analytical technique for the study. The population of the study consists of all the licensed pension fund administrators in Nigeria. A simple random sampling was used to select 108 respondents for the study. The secondary data and questionnaire was used to elicit information from the respondents after the reliability and validity test. The research questions were analyzed using descriptive statistics, while the hypotheses were tested using Pearson Products moment correlation vie SPSS at 95% level of confidence. The findings from the study show that there is Relationship between Retirement Pension Account and Return on Economic and Social Infrastructural Financing; also the study found that there is a significant Relationship between Superannuation Pension Account and Economic and social Infrastructural Financing in Nigeria. With the pool of pension funds, investment in infrastructure projects will be very meaningful and relevant to the growth of Nigeria's economy.

Zubair (2016) studied the effects of pension funds' investments on capital market performance in Nigeria. The study is a time series analysis covering a period from 2009Q3 to 2016Q1 using the Autoregressive Integrated Moving Average (ARIMA) regression technique. The study concludes that there is a significant positive relationship between pension funds' investments and the performance of capital market in Nigeria after the 2004 major industry reform. Specifically, the study concludes that total pension investments in Nigeria improved the performance of the Nigerian capital market significantly in terms of depth and liquidity (market capitalization and value traded. Moreover, the study concludes that the interaction of

macroeconomic indicators such as interest rate, inflation rate and GDP per capita with pension investments affect the capital market performance significantly. The study recommends that governments should ensure good and stable monetary policy in Nigeria so as to achieve the desired goal of the pension industry reforms, of investments capable of providing adequate resources to the retirees in Nigeria to cater for their old age needs. The study also recommends adequate regulations of the pension funds custodians and administrators in Nigeria, and policies that favour market structure with efficient investment of portfolios.

Bayar and Ozturk (2016) conducted a study on pension funds and economic growth: evidence from OECD countries. Raising life expectancy and decreasing fertility rates have caused the public pension systems to become financially unsustainable in many countries as of 1990s. Therefore, many countries have transited from unfunded pensions to funded pensions. The private pension plans and occupational pension plans which are generally funded pension plans have become important elements of overall pension systems. Consequently considerable increases in the value of pension funds have been witnessed in the recent years. This study investigates the growing value of the assets by pension funds on the economic growth in 26 OECD (Organisation for Economic Co-operation and Development) countries during the 2001-2015 period employing Dumitrescu and Hurlin (2012) causality test. The findings revealed a bilateral causality between pension funds and economic growth.

Nwanne (2015) examined the impact of contributory pension scheme on economic growth in Nigeria for the period 2004-2012. The objectives of the study were to determine the impact of pension funds on economic growth and as well as to ascertain the impact of pension savings mobilized on economic growth. The study used Ex-post-facto research design. Ordinary Least Square Regression method was used in data analysis. The study finds that pension funds have negative and significant impact on economic growth while pension savings had positive and significant impact on economic growth. The implication of the finding is that the contributory pension scheme has achieved the objective of using pension funds to provide long term capital that will promote economic growth. It also implies that pension savings contribution is low an indication of low coverage of the scheme. It was recommended that investment outlets of pension funds should be increased and efforts should be intensified to ensure greater compliance and mobilization of savings from contributors.

Akowe, Ocheni and Daniel (2015) evaluated the contribution of portfolios of new contributory pension fund on Nigerian gross domestic product (GDP) and the relationships between the pension portfolios with the Nigerian GDP. The population of the study entails nine (9) years while six (6) years were sampled for study (2007-2012). The parameters like Domestic Ordinary Shares, Federal Government of Nigeria Securities, Local Money Market Securities and Real Estate Property of pension fund for the period under review were used. Statistical tool like Scientific Packages for Social Scientists (SPSS) version 18.0 were used to regress the data and the hypotheses were tested using F-test and Pearson product moment correlation test. Result shows that, Domestic Ordinary Shares, Federal Government of Nigeria Securities and Real Estate Property of pension fund all have positive contributions to Nigerian gross domestic product for the period under review while Local Money Market Securities have negative contribution to Nigerian GDP. We recommended that, there should be more investment of pension fund in Domestic Ordinary Shares, Federal Government of Nigeria securities and Real estate property to boost Gross Domestic Product (GDP) of Nigeria. However, there should be a

reduce investment of pension fund in Local Money Market Securities because of its negative impact on the Nigerian gross domestic product as revealed by this study.

Edogbanya (2013) carried out a study on the assessment of the impact of contributory pension scheme on Nigerian economic development for the period (2007-2010). The study used survey research design, and sample size of 30 and 70 for both staff and customers of Legacy Pension Ltd. It also adopted correlation analysis for testing secondary data and ANOVA for the primary data. The study revealed that risk prevalence has positive effect on pension fund management and that the contributory pension scheme has significant positive impact on the GDP.

Ibiwoye and Mesike (2012) used Error Correction Model (ECM) and Ordinary Least square in their study on Pension Reform and Financial Market Development Nexus: Evidence from Nigeria. The error correction Model (ECM) approach examines if pension reform advances the development of financial market in Nigeria. Time series data were compiled and a functional relationship was established using the OLS technique. Statistical significance of the Error Correction Model confirmed the existence of an equilibrium relationship among the variables. The performance analysis of all their variables indicated that the reform period generates long-term contractual savings and stimulates the development of securities market.

Dostal (2010) studied pension reforms in Nigeria for the period 2006 to 2010. The study finds that the funded pension system has not had any significant impact on the development of financial market and that real sector investment was not boosted by savings from pension scheme. Also the macroeconomic credibility of the government has declined. The implication of the findings was that the regulatory environment failed to encourage interaction between pension reform and economic reform while problems of regulation within the system have also contributed to a lack of reform credibility.

In a study on emerging stock markets performance and economic growth in Iran, Seyyed (2010) presented a systematic investigation of the relationship between the two variables within the Vector Autoregressive (VAR) model and deduced that macroeconomic activity was a main cause for the movement of stock prices in the long run and that the stock market plays a role as a leading economic indicator of future economic growth in the short run. Relative to Nigeria, Atoyebi, Ishola, Kadiri, Adekunjo and Ogundeji (2013) studied the impact of capital market on economic growth using annual data of 1981 to 2010. Employing the Ordinary Least Square test and Vector Auto Regression technique, a percentage increase in market index and market capitalization was found to bring about respectively, an average of 33.7% and 44.8% increase in real GDP.

Kolapo and Adaramola (2012), applying Johansen cointegration and Granger causality tests, also examined the impact of the Nigerian capital market on its economic growth but from 1990 to 2010. Results show that a long run relationship exists between capital market (measured by market capitalization, total new issues, value of transactions, and total listed equities and government stocks) and economic growth (proxy by GDP) in Nigeria. The evidences from these studies reveal that the activities of the capital market tend to impact positively on the Nigerian economy. Similarly, Abu (2009) utilized the error correction approach to examine whether stock market development increases economic growth in Nigeria and it was found to be true.

However, Donwa and Odia (2010) empirically analyzed the impact of the Nigeria's capital market on her socio-economic development from the period of 1981to 2008 and it was

discover that capital market indices (market capitalization, total new issues, volume of transactions, total listed equities and government stock) have no significant impact on socio-economic growth.

Alenoghena (2014) investigated the contributions of capital market and financial deepening to economic growth in Nigeria over the period of 1981 to 2012. The analysis involves examining the stochastic characteristics of each time series variable by testing their stationarity using Augmented Dickey Fuller (ADF) test and estimates the error correction mechanism model. Several variables were adopted as proxies for capital market and financial deepening. The study revealed that Stock Market Capitalization (MCAP), Narrow Money Diversification (NMD; involving credit to private sector) and Interest Rate (INT) significantly impacted on the promotion of economic growth of the country during the period of study. Though, other measures of liquidity represented by Financial Development (FID) and Monetization Ratio (MTR) were not significant in explaining the trend in economic growth, they exhibited very strong coefficients in the process. It was recommended that Government and other stake holders in the economy should take measures to further improve the liquidity of the financial market to enhance overall economic efficiency in the country. The focus of policy targets should be specific in the expansion of credit to the producing sectors of the economy and further monetization of the economy by extending financial services to deficient locations. In addition to proper monetary policy management the study further recommends that concrete steps be taken to improve the performance of the Nigerian Stock Market.

Onwumere, Ibe, Ozoh and Mounanu (2012) examined the impact of financial deepening on economic growth in Nigeria. Adopting the supply-leading hypothesis using variables such as broad money velocity, money stock diversification, economic volatility, market capitalization and market liquidity as proxies for financial deepening and gross domestic product growth rate for economic growth, we found that broad money velocity and market liquidity promote economic growth in Nigeria while money stock diversification, economic volatility and market capitalization did not within the period studied (1992-2008). Government policy should therefore be geared towards strategically increasing money supply and promoting efficient capital market that will enhance overall economic efficiency, create and expand liquidity, mobilize savings, enhance capital accumulation, transfer resources from traditional sectors to growth inducing sectors (such as manufacturing and industry, agriculture and the services sectors) and also promote competent entrepreneurial response in various sectors of the economy.

Okoli (2010) examines the relationship between financial deepening and stock market returns and volatility in the Nigerian stock market for the period 1980-2009. The study employs the popular GARCH (1, 1) model. Four modeled equations were estimated and analyzed. Financial deepening was represented by two variables, the ratio of the value of stock traded to GDP (FD1t) and the ratio of market capitalization to GDP (FD2t). Empirical results revealed that financial deepening (FD1t) measured as the ratio of value of stock traded to GDP do not affect the stock market and there is no news about volatility. But financial deepening (FD2t) measured as the ratio of market capitalization to GDP affect the stock market. It indicated that financial deepening reduces the level of risk (volatility) in the stock market. Result also recorded that the conditional volatility of returns is slightly persistent.

3.0 METHODOLOGY

The study made use of time series data sourced from the 2017 CBN Statistical Bulletin and Global Financial Development bulletin, 2017 as provided by the World Bank. Secondary data were collected from 1981 to 2016. Ordinary Least Square statistical method was applied in data analysis. The functional relation of the model used is given as:

GDP = f (SMTGDP + SATGDP)… (i)
GDP = f (PATGDP + SATGDP)… (ii) while the models are specific as follows:
GDP = β_0 + β_1SMTGDP+ β_2SATGDP + μ … (iii) and
GDP = β_0 + β_1PATGDP+ β_2SATGDP + μ … (iv)

Where: SMTGDP = Stock market capitalization to GDP; SATGDP = Savings accumulated to GDP; PATGDP = pension fund assets to GDD; GDP = Gross Domestic Product; β_0 = Intercept; β_1 = Coefficient parameters; μ = error term.

4.0 RESULTS AND DISCUSSION

Table 1: Result of test of hypothesis one

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-16636.01	12587.49	-1.321631	0.1954
STOCKMARKETTOGDP	152.2591	432.9833	0.351651	0.7273
SAVINGSTOGDP	3919.304	1241.320	3.157367	0.0034

Source: Authors' calculation using E-view, 2019.

The regression equation is GDP = -16636.01 + 152.2591SMTGDP + 3919.304SATGDP. It is seen that the regression coefficient of Stock market capitalization and savings are positive. The regression equation point out that Stock-market capitalization to GDP and Savings has a positive relationship with GDP in Nigeria. Therefore, one percent change in Stock-market capitalization to GDP and Savings will increase GDP in Nigeria by 15225.91 and 391930.4 percent respectively. As a measure of the statistical reliability of the coefficient estimates the standard error of Stock-market capitalization to GDP at 432.9833 shows there is very high noise in the estimates. It **shows that the observations** are not close to the fitted regression line. The p-value of Stock-market capitalization to GDP at 0.7273 is higher than the level of significance of 0.05 percent. Based on the Decision rule, we uphold the null hypothesis. Therefore, we state that Stock-market capitalization to GDP has positive but no significant effect on economic growth in Nigeria.

Table 2: Result of test of hypothesis two.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11613.13	11693.29	0.993145	0.3279
PENSIONTOGDP	972.2951	235.7166	4.124849	0.0002
SAVINGSTOGDP	-583.2683	1491.724	-0.391003	0.6983

Source: Authors' calculation using E-view, 2019.

The regression equation is GDP = 11613.13 + 972.2951PATGDP - 583.2683SATGDP. It is seen that the regression coefficient of Pension fund assets is positive, while that of Savings is negative. The regression equation points out that Pension fund assets to GDP has a positive relationship with GDP in Nigeria while Savings has a negative relationship with GDP. Therefore, one percent change in Pension fund assets to GDP will increase GDP in Nigeria by 97229.51. On the other hand, a percentage change in Savings will reduce GDP by 58326.83 percent. As a measure of the statistical reliability of the coefficient estimates the standard error of Pension fund assets to GDP at 235.7166 shows there is very high noise in the estimates. It **shows that the observations** are not close to the fitted regression line. The p-value of Pension fund assets to GDP at 0.0002 is lower than the level of significance of 0.05 percent. Based on the Decision rule, we reject the null hypothesis and accept its alternative. Therefore, we state that Pension fund assets to GDP have positive significant effect on economic growth in Nigeria.

Also, Ebiringa and Duruibe (2015) found that in specific terms, the effect of financial system development on economic growth has been positively significant only in the short run. The relatedness in direction of the results of this study is believed to be as a result of growing volume of the respective proxies used to measure financial deepening. A look at their trend shows that as each new year comes the country records more in insurance industry premium, bank credits to the private sector, market capitalization in the capital market and pension fund contribution.

On the other hand, the findings that Stock-market capitalization to GDP has no significant impact on economic growth in Nigeria upholds the position of Ebiringa and Duruibe (2015) that financial system development seem not to significantly affect economic growth trends in Nigeria. This is may be due the constant change in inflation rate, exchange rate and interest rate in the economy which intermittently affect the value of financial resources mobilised by the financial industry as well as the returns they get.

Likewise the reforms that led to adoption of Contributory Pension Scheme instead of Defined Benefit Scheme have improved the pool of pension contributions, further leveraging the pension in.

5.0 CONCLUSION AND RECOMMENDATIONS

Based on the results of the study it is concluded that Pension fund assets to GDP have significant effect on economic growth in Nigeria while Stock-market capitalization to GDP have no significant effect on economic growth in Nigeria.

The ease of doing business in the Nigerian capital market is still shallow. The government should put in place measures that will remove such bottlenecks and draw in more expertise, investors and institutions into the capital market.

The Pension commission alongside other operators in the pension industry should work towards involving the informal sector in the Contributory Pension Scheme. This will reduce their exclusion from the financial system thereby further extending the reach of the financial sector to the wider economy. With more persons using the financial services there is more financial deepening and its attendant benefits to the society.

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APPENDIX

YEAR	GDP (Billion)	STOCK MARKET TO GDP (Billion)	PENSION ASSETS TO GDP (Billion)
1981	94.33	0	0
1982	101.01	0	0
1983	110.06	0	0
1984	116.27	0	0
1985	134.59	0	0
1986	134.60	0	0
1987	193.13	0	0
1988	263.29	0	0
1989	382.26	3.84	0
1990	472.65	3.95	0
1991	545.67	5.26	0

1992	875.34	4.52	0
1993	1089.68	11.71	0
1994	1399.70	13.26	0
1995	2907.36	17.04	0
1996	4032.30	29.01	0
1997	4189.25	35.84	0
1998	3989.45	34.80	0
1999	4679.21	18.16	0
2000	6713.57	7.47	0
2001	6895.20	10.89	0
2002	7795.76	3.92	0
2003	9913.52	10.71	0
2004	11411.07	16.97	0
2005	14610.88	17.76	0
2006	18564.59	19.55	0
2007	20657.32	35.47	73.85791
2008	24296.33	34.60	69.3626
2009	24794.24	20.86	49.69981
2010	54612.26	11.14	65.86138
2011	62980.40	10.84	46.26455
2012	71713.94	10.33	40.4777
2013	80092.56	13.24	46.04026
2014	89043.62	12.73	37.13013
2015	94144.96	10.56	41.97934
2016	101598.48	10.56	38.14573

Source: Central Bank of Nigeria Statistical Bulletin, 2017 and Global Financial Development Database, 2017