# FINANCIAL DEEPENING AND CAPITAL MARKET EFFICIENCY IN NIGERIA

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#### **ABSTRACT**

This study examined the effect of financial deepening and capital market efficiency in Nigeria. The objective was to examine the effect of various measures of financial deepening and the effect on capital market efficiency. The study employed time series data sourced from the publications of Central Bank of Nigeria from 1987-2020. The null Hypotheses (H<sub>0</sub>) were tested at 0.05 level of significance. The F-statistics and the probability indicate that the model is statistically significant while the Durbin Watson indicates that there is no presence of serial autocorrelation among the variables. The study conclude that there is no significant relationship between money supply and capital market efficiency in Nigeria, there is no significant relationship between private sector credit and capital market efficiency in Nigeria, there is no significant relationship between interest rate spread and capital market efficiency in Nigeria and that there is no significant relationship between interest rate spread and capital market efficiency in Nigeria. The study recommends that the private sector should be encouraged to invest in capital market and that the illiquidity status of the capital market should be improved to make it more viable for investors to invest, and such overtures can contribute to economic growth.

**Keywords:** Banking sector development, broad money supply, financial deepening, capital market deepening, capital market efficiency

#### INTRODUCTION

The capital market plays a prominent role in the growth and development of countries around the world. Beside mobilization of necessary liquidity, a country's capital market generates medium and long term capital which is crucial for economic development as evidenced by the positive relationship between long term capital and economic growth (Goldsmith, 1969; Hicks, 1969; Gurley & Shaw, 1955). A well-developed capital market assists in price discovery, liquidity provision, reduction in transactions costs, and risk transfer. This means that well-functioning capital markets increase economic efficiency, investment and growth. In search of ways to improve the activities of capital markets around the world, financial deepening has been identified as one of those strategies whose implementation can quicken the pace, development and contributions of the market.

Financial deepening relate to the process of financial intermediation. Financial markets undertake this vital role of intermediation, by channeling funds from surplus units (savers) to deficit units (investors). When a country's financial intermediation is efficient and effective, the outcome is usually a well-developed and functioning financial sector with capacity to support economic growth. But where the contrary is the case, the result is an economy beset with "financial

shallowness" which is a common problem that affect growth of development economies (Ghani, 1992; Goldsmith, 1969). Developing countries possess financial assets and instruments that are narrow and this condition is usually akin to shallow financial depth; and partly explains why countries with shallow financial depth experience low or negative per capita income.

The concept of market efficiency had been anticipated at the beginning of the century (see Bachelier, 1900). Factors that determine capital market efficiency can be derived primarily through two different methodologies. Historically, the arbitrage pricing theory (APT) (Ross, 1976) has been used as the methodology to explore the link where multiple risk factors can explain asset returns. Early empirical papers on APT focused on individual security returns but it may also be used for the stock market, where change in a macroeconomic variable could be seen as a change in the underlying systematic risk factor influencing future returns. Relevant studies that have used this include Fama (1981, 1990), Chen et al. (1986), Fama and French (1989), Schwert (1990), Ferson & Harvey (1991) and Black et al. (1997).

These studies generally model short run relationship between macroeconomic variables and stock price returns. Each of these studies found that stock returns and various macroeconomic factors are, to varying degrees, correlated, using either developed or developing countries' market data. An alternative approach that is widely used is cointegration analysis which was initially proposed by Granger (1986) and subsequently enhanced by Johansen (1991) and is a well-established methodology when testing long run relationships among variables. Reforms in the capital market can affect the efficiency of the capital such as the deregulation of stock prices in 1993 to allow market forces of demand and supply determine that market value of traded equities in Nigeria.

Efficient Market Hypothesis (EMH) asserts that in an efficient market, prices at all times fully reflect all available information that is relevant to their valuation (Fama, 1970). Thus, security prices at any point in time are unbiased reflection of all available information on the security's expected future cash flow and the risk involved in owning such a security (Reilly & Brown, 2003). This implies that investors can expect to earn merely risk-adjusted return from all investment as prices move instantaneously and randomly to any new information (Kendal, 1953).

Conceptually, Shaw and McKinnon (1973) refer to financial deepening as the improvement or increase in the pool of financial services that are tailored to all levels in the society. It also refers to the increase in the ratio of money supply to Gross Domestic Products or price index which ultimately postulates that the more liquid money is available in the economy, the more opportunities exist in that economy for continued and sustainable growth. Financial deepening implies the ability of financial institutions to effectively mobilize savings for investment purposes. It enables the deposit money banks to perform their intermediary functions and achieve their operational objectives.

The depth of the financial market effects of high interest rate encourage savings and discourage investments, thus the increased liabilities of the banking system to give more resources to investments is more efficient. However, the problem with financial deepening and liquidity of deposit money banks in Nigeria's financial market is mismatch of policies, financial dualism and influence of international financial environment on Nigeria's financial market.

Research regarding market efficiency started in the beginning of the 1950s when Kendall and Hill (1953) discovered that share prices tended to fluctuate randomly. There have been many definitions of an efficient market, In the 1960s Samuelson and Mandelbrot discovered three cornerstones for an efficient market: (1) investors act in a rational manner, which, result to a rational valuation of shares. (2) An irrational investor will randomly act upon the market, hence these transactions will not have effect on market prices. (3) The potential impact of an irrational investor will be eliminated by the rational investors (Lawrence et al., 2007). Studies on efficient market hypothesis focused on testing the validity of the theory.

Previous studies have focused on non-linear estimation of the capital asset pricing model of Japanese Automobile Industry Firms (Tsuji, 2017); and have examined capital asset pricing model, theory and practice (Al-Afeef, 2017). The study of Al-Afeef (2017) described the impact of stock beta and market return. Gahe et al. (2017) examined capital asset pricing model testing in West Africa economic and monetary Union Stock Market in Ivorian Listed Firms. From the above knowledge gap, this study wants to examine the effect of financial deepening on efficiency of Nigeria capital market.

#### LITERATURE REVIEW

#### **Theoretical Foundation**

The study is anchored on financial repression theory, theory of intermediary-based financial system and theory of bank based financial system.

**Financial repression theory**: Governments and particularly developing country governments have intervened extensively in order to divert large amount of funds to the priority sectors such, state owned enterprises, small and medium scale firms and to a lesser extent housing, exports and underdeveloped regions. One way that government's finance expenditures in excess of tax revenues is to force the private sector, insurance companies, pension funds, commercial banks and other public financial institutions to buy government securities at below market yields as generally returns on government securities is much below the market rates of interest.

A typical set of restrictions includes the prohibition on domestic residents from holding financial assets abroad, coupled with compulsory quotas of government bonds in financial intermediaries. The rationale for financial repression has been the response to the simplistic interpretations of Keynesian theories: It was thought that, by controlling interest rates at reasonably low levels and by expanding the scope of government direct intervention, investment would greatly increase. According to Prebisch (1974), government intervention aimed at controlling interest rates accelerates growth. The author contends that lower interest rates encourage savings and that the government should lower interest rates to a level where full employment is achieved.

Theory of intermediary (market) based financial system: The market-based theory underscores the importance of well-functioning markets, and accentuates the problems of bank-based financial systems. Generally, big, liquid and well-functioning markets foster growth and profit incentives, enhance corporate governance and facilitate risk management (Levine, 2002; Beck & Levine, 2002). According to the theory of intermediary-based financial system, Commercial banks are more growth enhancing than market at the early stages of economic growth and development. In fact these authors who believe in the bank based theory are of the view that financial intermediaries

are also vital participant in market. They specifically contribute to effective functioning of the market by providing liquidity which is essential in transaction and in critical time of crisis.

Critics of this view have stressed the short coming of intermediary based systems by asserting that it reveals information publicly, thereby reducing incentives for investors to seek and acquire information (Boyd & Prescott, 1986). Thus, distortion that emanate from asymmetric information can be alleviated by banks through forming long-run relationships-with firms and through monitoring. As a result of this, bank based arrangement can produce better improvement in resource allocation and corporate governance than market-based institutions (Stiglitz, 1995; Blide, 1993).

Theory of bank based financial system: The theory of bank-based financial system stresses the positive role of banks in development and growth, and, also, emphasizes the drawbacks of market-based financial systems. The theory opines that banks can finance development more effectively than markets in developing economies, and, in the case of state-owned banks, market failures can be overcome and allocation of savings can be undertaken strategically (Gerschenkron, 1962). In a way, those banks that are not impeded by regulatory restrictions, can exploit economies of scale and scope in information gathering and processing. Levine (2002), Beck and Levine (2002) provide more details on these aspects of bank-based systems. In fact, bank-based financial systems are in a much better position than market-based systems to address agency problems and short-termism (Stiglitz, 1985; Singh, 1997).

## **Financial Deepening**

Conceptually, 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. Encompassing long maturities; financial intermediaries and markets are able to deploy larger volumes of capital and handle larger turnover, without necessitating large corresponding movements in asset prices (market liquidity); and the financial sector can create a broad menu of assets for risk-sharing purposes (hedging or diversification). In other words, deep markets allow savers to invest in a broad range of quality investment and risk-sharing instruments and allow borrowers to likewise tap a broad range of financing and risk management instruments (Goswami & Sharma, 2011). Financial deepening is widely believed to confer important stability benefits on an economy, albeit with caveats. For instance, by increasing transaction volumes, it can enhance the capacity to intermediate capital flows without large swings in asset prices and exchange rates. But it can also attract volatile capital inflows, complicating macroeconomic management (IMF, 2011).

Financial Deepening may be determined by monetary and fiscal policies, interest rates and financial intermediation. Advocates of financial deepening state that forced savings through government budget deficit that causes inflation is a necessary result of selective intervention, the essential feature of financial deepening is said to be freedom of interest rate movement without regulation and absence of discriminatory taxes, subsidies or regulations of any kind among industries including foreign investors, allowing exchange rate to settle at the point in which demand and supply are balanced (Eshaag, 1983).

Panicos and Luintel (1996) contend that with the exception of a lending rate ceiling, other controls are found to influence financial deepening negatively, independently of the well-known effect of the real interest rate. Exogeneity tests suggest that financial deepening and economic growth are

jointly determined. Thus, policies which affect financial deepening may also have an influence on economic growth. Neoclassical theorist of saving assumption that rise in the rate of interest would have a significant positive effect on private propensity to save and vice versa is doubtful validity (Eshag, 1983). The propensity to save is determined by a large number of factors of which interest rate plays minor role. According to Keynes (1936) since saving is equal to national income less consumption, it follows that measures which will succeed in restraining growth of government consumption without at the sometime retarding the growth of production will also raise the share of saving in the national income.

Financial deepening and economic development are intertwined and various studies have shown that in the long run, interest rate affects financial depth and by extension economic growth (Odhiambo, 2009) Odhiambo (2009) studied economic development, interest rate reforms, financial deepening and economic growth in Kenya and concludes that interest rate liberalization in Kenya has succeeded in increasing economic growth through its influence on financial depth. The exact theoretical relationship between the rates of interest and returns on the stocks or economic development is determined by the spread of interest over a given period of time.

Kheswar (2006) made an attempt to test for the effects of financial repressionist policies on financial deepening and economic development in the case of Mauritius. Using the method of principal components, direct measures of banking controls are constructed and used in estimating financial depth and economic growth equations. The study found no significant evidence that some form of financial repression has contributed to financial depth and economic growth. Instead, the results confirmed that banking controls have inhibited financial sector development in Mauritius, which is in line with the financial repressionist literature.

Moreover, it is found that non-interest factors such as bank branches have promoted the rapid growth in bank deposits even during the period of financial repression. There is also a two-way relationship between banking sector development and economic growth in the economy. The major policy implication is that the pursuit of financial liberalization and banking sector development is no doubt a right strategy to achieve higher economic growth.

Since financial development means an increase in the supply of financial assets in the economy, it is important to develop some measures of the widest range of financial assets, including money. This will involve identifying these financial assets, determining their measures and summing them up. The sum total of all the financial assets is one broad measure that represents financial deepening; the other, as indicated earlier, is the growth rate of per capita real money balances. The range of financial assets to be considered in this study includes broad money (M2), liabilities of non-bank financial assets (NB), treasury bills (TB), value of shares (VS) and money market fund (MMF). The sum of these financial assets can thus approximate one of the widest measures of financial deepening.

The summing up of these financial assets to represent a broad measure of financial deepening is not a problem, but the availability of data for some of them is. Because of narrow and undeveloped capital markets in many Sub-Saharan African countries, data on value of shares (VS) and money market funds (MMF) in particular are not available. It is equally difficult to get consistent annual data on all financial assets except broad money (M2). If data had been available on these financial

assets, the degree of financial intermediation, which is an important part of financial deepening (FDY), would be the sum of the measures of these financial assets, thus:

$$FDY = (M2 + TB + NB + VS + MMF)/Y \tag{1}$$

The financial deepening based on such an identity is unlikely to capture a good number of Sub Sahara African countries because these countries have narrow and shallow capital markets. Thus, the market capitalization as a percentage of GDP in these countries has been seen to be quite low compared with much higher percentages in advanced economies (Nyong, 1996). This may be because many companies in SSA are not quoted on the stock exchange. One example is Nigeria, where funds from the capital market in the 1970s formed a negligible 5% of total capital investment (Alili, 1984). In view of the lack of information, our study uses broad money (M2) as a proxy for the measure of financial deepening. Given the empirical/scientific work of Jao (1976), Fry (1978) and Ogun (1986), however, financial deepening is represented by two variables: the degree of financial intermediation measured, in our case M2/Y, and the growth rate of per capita real money balances (GPRMB). Financial development and long-run endogenous growth variables

## **Concept of Market Efficiency**

An efficient market is one in which prices fully reflect available information. One implication of an efficient market is that no abnormal returns can be made from this information because current prices already reflect the information; abnormal returns (if any) should not be statistically significant from zero (Fox & Opong, 1999; Fama, 1970). Market efficiency depends on the ability of traders to devote time and resources to gathering and disseminating information. Markets that are more efficient attract more investors, which translate into increased market liquidity (Osei, 1998). Investors care about market efficiency because stock price movements affect their wealth.

More generally, stock market inefficiency may affect consumption and investment spending and therefore influence the overall performance of the economy. A market is efficient with respect to publicly available information if it is impossible to make an economic profit by trading on the basis of the information set (Jensen, 1978). The semi–strong efficient market requires that stock prices follow a random path and that the market price of a stock reflects all publicly available information such as earnings and dividend announcements. The efficiency tests, therefore, consist of measuring the ability of the market to anticipate new information and the speed with which it adjusts to such data (Khoury, 1983).

## **Empirical Review**

Eze and Okoye (2013) examined impact of insurance practice on growth of Nigeria's economy and observed that insurance premium capital significantly impact Nigeria's economic growth; that the level of total insurance significantly affect economic growth; and that investment has causal relationship between insurance sector development and economic growth. Lucky and Uzah (2016) in their study, examined factors that determine Nigeria's capital formation; and concludes that broad supply, credit to private sector, gross national savings, commercial banks' lending rate, exchange rate, inflation rate, external debt, public expenditure, government revenue, terms of trade and operating surplus to GDP have significant impact on Nigeria's gross fixed capital formation.

Torbira and Ogbulu (2014) examined the relationship between fund mobilization by insurance companies and gross fixed capital formation in Nigeria. The study specifically sought to determine how gross fixed capital formation responds to stimuli emanating from insurance companies. The short run results reveal four explanatory variables namely: premium from fire, accidents, motor

vehicles and employee liabilities insurance policies positively and insignificantly correlate with gross fixed capital formation while the relationship between premium from marine insurance policies and GFCF is both negative and insignificant. In the long run, the fund mobilization variables by insurance companies positively and significantly impact on the growth of gross fixed capital formation. In addition, the Granger causality test provides no evidence of causality among the variable.

Also, Ugwuegbe and Uruakpa (2013) investigated impact of capital formation on economic growth in Nigeria and reported that capital formation has positive and significant impact on economic growth in Nigeria for the period under review; just as the study of Shuaib et al. (2015) on impact of government agricultural expenditure on Nigeria's economic growth found that government agricultural expenditure has a direct statistically significant relationship with economic growth. Thus, Ajao (2011) concluded that long-term capital formation in Nigeria were not majorly sourced from the capital market as the above result shows the marginal contribution of Market Capitalization and New Issues to Gross Fixed Capital Formation. Though, it is unarguable that when investors take position for profit, it can affect the level of wealth which can then be used to build private capital. This result is in line with the findings of Sarkar (2006) that there exists no meaningful relationship between stock market capitalization and gross fixed capital formation.

In other studies, Adekunle and Aderemi (2012) examined the relationship between Domestic Investment, Capital Formation and Population Growth in Nigeria and reported that the rate of investment does not assist the rate of growth of per capital GDP in Nigeria. The paper tests on the curve estimation regression models confirm that growth is in existence but is found to be insignificant. The linear result indicates the importance of government expenditure, capacity utilization and bank credit in increasing the income of Nigerians. The results also show that there is negative relationship between growth rates of the population and capital formation. With the curve estimation method results, investment rate can engender growth in the economy though slowly, on a linear path. Similarly, Akujuobi (2008) posits that FDI is a significant positive contributor to overall capital formation efforts in Nigeria. Even though, the gains of FDI do not come so automatically, rather, efforts must be directed at removal of such impediments as poor transparency in laws, especially in the areas of property rights, patent rights, copy right protection and commitment to enforcement of contracts.

Okunlola (2012) regressed Gross Domestic Product against yearly stock market performance variables adopting a multi-linear approach on Nigerian data. The result shows a positive and significant relationship between total market capitalization, total stock exchange and economic growth indicator respectively. While the study of Woon and David (2005) on stock market liquidity and macroeconomic variables reported that liquidity stock is persistently and statistically significant on real balances in the economy. Ngerebo-a and Torbira (2014) examined the relationship between capital market performance indicators and gross fixed capital formation in Nigeria from 1980 to 2011. The Granger Causality Test results reveal that there is a unidirectional causality flowing from Gross Fixed Capital Formation (GFCF) to market capitalization. This suggests that growth in GFCF could raise the value of listed securities, boost the value of the firms, increase the prices of listed equities and enlarge the size of the country's capital market. The lack of causality flowing from capital market activities to Gross Fixed Capital Formation may be attributed to the low level of capital market development. Other studies that found positive link between capital formation and economic growth are those of Onwumere et al. (2013), Ageli and

Zaidan (2013), Oima and Ojwang (2013), Shittu (2012), Omodugo et al. (2013), Uremadu (2006), Enofe et al. (2013), Andabai and Tonye, (2013) and Iwedi and Igbanibo (2015).

#### **METHODOLOGY**

This study used annual data to examine the nexus between financial intermediation and the Nigerian economic growth. The research design is the quasi experimental design in which the effect of the independent variables is experimented in the regression line. The extent in which the variables impact on the dependent variable is detected from the regression coefficient. Secondary data is used in this study, the data will be sourced from Central Bank of Nigeria (CBN) statistical bulletin various issues and economic and financial reports. The technique used in this study is the Ordinary Least Square (OLS) estimation technique. The test instruments in the OLS are the T-statistics and F-test which were used to test the significance of variables and the overall significance of the regression respectively. Other test instruments also employed were the Durbin Watson test which was used to test the presence or absence of auto correlation between and among the explanatory variables and the adjusted R square used to test the percentage variation of the dependent and the independent variables.

## **Model Specification**

The model specification in this study is based on financial intermediation theory on the relationship between finance and economic growth. The model below examined the relationship between financial deepening and capital formation in Nigeria. It is specified as follows:

ASPI = f (MS, PSC, CDM, IRS, BSD) ASPI =  $\beta_0 + \beta_1 MS + \beta_2 PSC + \beta_3 CDM + \beta_4 IRS + \beta_5 BSD + \mu$  (3)

#### Where:

ASPI = All share price index as percentage of gross domestic product
MS = Broad money supply as percentage of gross domestic product

CDM = Capital market deepening as market capitalization as percentage of gross domestic

product

PSC = Private sector credit IRS = Interest rate spread

BSD = Banking sector development as total banks assets to gross domestic product

 $\mu$  = Error term

#### RESULTS AND INTERPRETATIONS

**Table 1: Regression Results** 

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.71	1.51	3.12	0.00
BSD	-0.02	0.01	-1.57	0.13
CDM	0.03	0.04	0.59	0.56
IRS	0.02	0.02	1.01	0.32
MS	-0.15	0.14	-1.13	0.27
PSC	-0.03	0.13	-0.27	0.79
ECM(-1)	0.36	0.18	1.94	0.06
R-squared	0.62	Mean dependent var		1.66
Adjusted R-		-		
squared	0.53	S.D. dependent var		1.38
S.E. of		-		
regression	0.94	Akaike info criterion		2.91
Sum squared				
resid	23.10	Schwarz criterion		3.22
Log likelihood	-40.94	Hannan-Quinn criter.		3.01
F-statistic	7.12	Durbin-Watson stat		2.05
Prob(F-statistic)	0.00			

Source: Extracted by Researcher from E-View 9.0 (2022)

From the result, the constant term is positive, in the model, it meets our a priori expectation. That is if other variable that contribute to the all share price index is zero, there are other variables that can contribute in a positive or negative way to Nigeria all share price Index. However, from the regression model, the study established that banking sector deposits to gross domestic products, money supply and private sector credit have negative and no significant effect on the capital market efficiency proxy by all share price index while capital market deepening and interest rate spread have positive and no significant effect on capital market efficiency.

The study further noted that 62.1 percent variation in capital market efficiency can be traced to variation in financial sector deepening while the remaining 37.9 is traced to other factors not captured in the model. The F-statistics and the probability indicates that the model is statistically significant while the Durbin Watson indicates that there is no presence of serial autocorrelation among the variables.

#### **DISCUSSION OF FINDINGS**

The objective of the study was to examine the effect of financial deepening on Nigeria capital market efficiency using secondary data sourced from Central Bank of Nigeria Statistical Bulletin. The study found that banking sector development, money supply and private sector credit have negative and no significant effect on the capital market efficiency such that a unit increase in the variables reduces capital market efficiency by 0.02, 0.15 and 0.03 percent over the periods covered in this study. The negative effect of the variables contradicts the a-priori expectations of the study and the efficient market hypothesis. Theoretically, this finding validates the financial repression theory by Shaw and Mackinnon in 1973. Empirically, this finding contradict the findings of Akani and Lucky (2014) that there exists a long-run relationship between Currency in Circulation (CR) and Demand Deposit (DD) and Aggregate Stock Price, Time Deposit (TD), Savings Deposit (SD)

and Net Foreign Assets (NFA) have negative relationship with aggregate stock prices, Afolabi et al. (2017) that arise from measurement errors in individual beta estimates, the securities were combined into portfolios and the finding Oke (2013) that the slope of the Security Market Line (SML) should equal the excess return on the market portfolio is also not supported by this study.

The findings of Adedokun and Olakojo (2012) that CAPM is inadequate to explain the role of asset risk for the determination of expected return on investment in Nigeria's equity market. Dzaja and Aljinovic (2013) that higher yields do not mean higher beta. Reddy and Thomson (2011) that on the assumption that the residuals of the return-generating function are normally distributed the CAPM could be rejected for certain periods, though the use of the CAPM for long-term actuarial modeling in the South African market can be reasonably justified.

However, the study found that interest rate spread and capital market development have positive but no significant effect on capital market efficiency. The results from the study prove there is positive and not significant relationship between variables and capital market efficiency in Nigeria. This implies that financial sector globalization determine capital market efficiency in Nigeria, this finding confirm our a-priori expectations and objectives of financial sector reforms such as the deregulation of stock prices in 1993, the internationalization of capital market such as the introduction of Central Security Clearing System. Theoretically, this finding validates the financial repression theory by Shaw and Mackinnon in 1973. Empirically, this finding confirm the findings of Adedokun and Olakojo (2012) that CAPM is inadequate to explain the role of asset risk for the determination of expected return on investment in Nigeria's equity market. Dzaja and Aljinovic (2013) that higher yields do not mean higher beta. Reddy and Thomson (2011) that on the assumption that the residuals of the return-generating function are normally distributed the CAPM could be rejected for certain periods, though the use of the CAPM for long-term actuarial modeling in the South African market can be reasonably justified.

## CONCLUSION AND RECOMMENDATIONS

This study examined effect of financial deepening and capital market efficiency in Nigeria. The study employed time series data sourced from the publications of Central Bank of Nigeria from 1987-2020. The study found a constant term is positive, in the model; it meets our a priori expectation. That is if other variable that contribute to the all share price index is zero, there are other variables that can contribute in a positive or negative way to Nigeria all share price Index the study also found that regression model, the study established that banking sector deposits to gross domestic products, money supply and private sector credit have negative and no significant effect on the capital market efficiency proxy by all share price index while capital market deepening and interest rate spread have positive and no significant effect on capital market efficiency. 62.1 percent variation in capital market efficiency can be traced to variation in financial sector deepening while the remaining 37.9 is traced to other factors not captured in the model. The F-statistics and the probability indicate that the model is statistically significant while the Durbin Watson indicates that there is no presence of serial autocorrelation among the variables.

From the findings, the study conclude that there is no significant relationship between money supply and capital market efficiency in Nigeria, there is no significant relationship between private sector credit and capital market efficiency in Nigeria, there is no significant relationship between capital market development and capital market efficiency in Nigeria, there is no significant

relationship between interest rate spread and capital market efficiency in Nigeria and that there is no significant relationship between interest rate spread and capital market efficiency in Nigeria.

In view of the findings of this study and their consistency with extant literature, the following recommendations are made:

- 1. The private sector should be encouraged to invest in capital market. This can be done through educating and enlightening the public, using knowledgeable people and experts or professionals that are competent in stock market dealings. This will increase financial market development indicators.
- 2. The illiquidity status of the capital market should be improved to make it more viable for investors to invest, and such overtures can contribute to economic growth. This can be achieved through policies that increases banking sector development and this can attract foreign portfolio investment and increase the market efficiency.
- 3. The funds raised by government in the form of government securities in the capital market should be put into productive sectors of the economy that will necessitate to growth in all capital market indicators.
- 4. Domestic monetary and macroeconomic policies should be formulated to control hyperinflation in the economy to encourage savings, investment and macroeconomic stability that will enhance capital market efficiency.
- 5. Policy such as a money supply should be properly factored into the monetary policy objective to encourage cross boarder flow of financial asset and investment into the Nigeria financial market.

## **REFERENCES**

- Abu-Bader, S., & Abu-Qarn, A. M. (2008). Financial development and economic growth: Empirical evidence from MENA countries. Review of Development Economics, 1(2), 803-817.
- Aga, M., & Kocaman, B. (2008). Efficient Market hypothesis and emerging capital markets: Empirical Evidence from Istanbul Stock Exchange. International Research Journal of *Finance and Economics*, *5*(23), 111-114.
- Ageli, M. A., & Zaidan, S. M. (2013). Saudi financial structure and economic growth: A macro econometric approach. International Journal of Economics and Finance, 4(4), 227-238.
- Aiyedogbon, J. O. C. (2011). Military expenditure and gross capital formation in Nigeria, 1980 2010. European Journal of Humanities and Social Sciences, 7(1), 290-310.
- Ajao, M. G. (2011). Stock market development, capital formation and growth in Nigeria. International Journal of Current Research, 33(6), 382-388.
- Al-Faki, M. (2007). Understanding the Nigerian capital market: Best investment practices and regulatory compliance. Prime Publishers.
- Andabai, P. W., & Tonye, O. (2014). Financial intermediation and economic growth in Nigeria. 1988-2013: A vector error correction investigation. Mediterranean Journal of Social Sciences, 5(17), 19-26.

- Asaolu, T. O., & Ogunmuyiwa, M. S. (2010). An econometric analysis of the impact of macroeconomic variables on stock market movement in Nigeria. Asian Journal of Business *Management*, 3(1), 72-78.
- Audu, I. (2003). Domestic credit and economic growth in Nigeria, an unpublished doctoral dissertation submitted to the department of economics (Unpublished doctoral dissertation) Ahmadu Bello University, Zaria.
- Dabwor, T. D. (2009). The Nigerian banking system and the challenges of financial intermediation in the twenty first century. Jos Journal of Economics, 4(1), 90-100
- David, N. (1997). Capital market theory: Is it relevant to practitioners? Port Harcourt: Pearl Publishers.
- David, T. T., Scott, P., & Phanindra, V. W. (2007). Financial Development and Economic Growth: Lessons from South African Experience. Journal of Applied Economics 4(2), 75-89.
- Demirguc-Kunt, A., & Levine, R. (1996). Stock markets, corporate finance and economic growth: An overview. World Bank Economic Review, 10(2), 223-239.
- Dorfman, M.S. (2005). Introduction to risk management and insurance (8th edition). Prentice-Hall of India Private Limited.
- Egene, J. (2012). Nigeria's stock market out of doldrums. This Day Live. Retrieved from http//www.thisdaylive.com.
- Enofe, A. O., Osa-Erhabor, V. E., & Ehiorobo, A. J. (2013). Finance companies, Central Bank of Nigeria and economic development. Journal of Economic and Sustainable Development, *4*(10), 112-121.
- Ezirim B. C. (2005). Finance dynamics: Principle, techniques and application. Markowitz Centre for Research and Development.
- Ezirim, C. B. (2006). Challenges of institutional funds Mobilization and investments: Comparative survey of selected financial institutions in Nigeria. African Economic and Business Review, 4(2), 89-100.
- Gorton, G., & Winton, A. (2002). Financial intermediation. NBER Working Paper No, 8928. Retrieved from www.nber.org/papers/w8928.
- Granger, C. W. J. (1969). Investing causal relations by econometric models and cross-spectral methods, Econometrica, 37, 424-438.
- Hao. C. (2006). Development of financial intermediation and economic growth: The Chinese experience, China Economic Review, 17(4), 347-362.
- Irfan, L., Sulaiman, D., & Adnan, H. (2009). Effect of financial structure and financial development on economic growth: A case study of Pakistan. European Journal of Social Sciences, 11(3), 418-427
- Isern J., Agbakoba A., Flaming, M., Mantilla, J., Pellegrimi, G. & Tarazi, M. (2009). Access to finance in Nigeria: Microfinance, branchless banking and SME finance. UNDP/UNICEF.
- Iwedi, M., & Igbanibo, D. S. (2015). Modelling financial intermediation functions of banks: Theory and empirical evidence from Nigeria. Research Journal of Finance and Accounting, 6(18), 159 -174
- Iwedi, M., & Igbanibo, D. S. (2015). The nexus between money market operations and economic growth in Nigeria: An Empirical Investigation. IIARD International Journal of Banking and Finance Research, 1(2), 1-17.
- Jayaratne, J., & Strahan, P. (1996). The finance-growth nexus: evidence from bank branch deregulation. Quarterly Journal of Economics, 11(1), 639-670.

- Jim, O. (2008) Blossoming the Nigerian economy: Real sector financing. A CBN Seminar on Banks and the Nigerian Economy, Abuja, Nigeria.
- Kehinde, J. S., & Adejuwon, K. D. (2011). Financial institutions as catalyst to economic development: The Nigerian experience. European Journal of Humanities and Social Sciences, 8(1), 323-334.
- Khan, M. A. & Yeneng, S. (1997). The capital-asset-pricing model and arbitrage pricing theory: a unification. Proc National Academy Science, 9(4), 42-69.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and finance. *Journal* of Political Economy, 106(6), 1113-1155.
- Laopodis, N. T. (2001). Effects of government spending on private investment. Applied Economics, 33, 1563-1577.
- Luintel, K. B. (2000). Real exchange rate behaviour: Evidence from black markets. Journal of Applied Econometrics, 15, 161-185.
- Luintel, K. B., & Khan, M. (1999). A quantitative reassessment of finance-growth nexus: Evidence from Multivariate VAR. Journal of Development Economics, 60(2), 381-405.
- Luintel, K. B., & Khan, M. (2002). Are international R&D spillovers costly for the U.S.? (Discussion Paper). Department of Economics and Finance: Brunel University.
- McKinnon, R.I. (1973). Money and capital in economic development. Washington DC: The Brookings Institution.
- Ndi-Okere, O. (2006). A review of the performance of the Nigerian Stock Exchange in 2006. NSE Publications.
- NSMA (2002). Investment opportunities and challenges in the Nigeria capital market. Nigerian Stock Exchange Annual Report. NSE Publications.
- Nwaogwugwo, I. C. (2008). Stock market development and economic growth in Nigeria: The causal linkage. Nigerian Journal of Securities and Finance, 13(1), 15 – 124.
- Odhiambo, N. M. (2007). Supply-leading versus demand-following hypothesis: Empirical evidence from SSA countries. African Development Review, 19, 257-280.
- Ogbonna C. M. (2003). An assessment of the role of finance houses in Nigeria economic development. Abia State University, Uturu.
- Ogun, O. D. (1986). A note on financial deepening and economic growth: Evidence from Africa. Nigerian Journal of Economic and Social Studies, 28(2), 275-283.
- Oima, D., & Ojwang, C. (2013). Market-based and bank-based financial structure on economic growth in selected ECOWAS countries. International Journal of Education and Research, *1*(2), 1-10 67.
- Okunlola, F. A. (2012). Capital market and economic growth in a developing economy: The Nigerian experience. (Unpublished MBA Seminar Paper) University of Port Harcourt, Port Harcourt.
- Olofin, O. O., & Afangideh, U.J. (2008). Financial structure and economic growth in Nigeria: A macroeconometric approach. Nigerian Journal of Securities and Finance, 13(1), 47-69.
- Omodugo, V. A., Kalu, I. E., & Anowor, O. E. (2013). Financial intermediation and private sector investment in Nigeria. Research Journal of Finance and Accounting, 4(12), 47-54.
- Onoh J. K. (2002). Dynamics of money, banking and finance in Nigeria: An emerging market. Abia: Astra Meridian Publishers.
- Onwumere J. U. J., Onudugo, V., & Imo, G. I. (2013). Financial structure and economic growth: Evidence from Nigeria. Global Journal of Management and Business Research Finance, *13*(5), 19-26.

- Osaze, E. B. (2007). Capital markets African and global, history, systems, practices, operations, procedure and investment techniques. Book House.
- Pat, D., & James, O. (2010). An empirical analysis of the impact of the Nigerian capital market on her socio-economic development. *Journal of Social Sciences*, 24(2), 135-142.
- Riman, H. B., & Eyo, E. (2008). Stock market performance and economic growth in Nigeria: A causality Investigation. *Global Journal of Social Sciences*, 7(2), 85-91.
- Sarkar, P. (2006). *Stock market development and capital accumulation in less developed countries*. (Mimeograph) Jadavpur University, Kolkata India.
- Schumpeter, J. A (1911). Theory of economic development. Harvard University Press.
- Shaw, E. S. (1973). Financial deepening in economic development. Oxford University Press.
- Singh, A. (1997). Stock markets, financial liberalization and economic development. *Economic Journal*, 10(7), 771-782.
- Ugwuegbe, S. U., & Uruakpa, P. C. (2013). The impact of capital formation on the growth of Nigerian economy. *Research Journal of Finance and Accounting*, 4(9), 36-40.
- Wolde-Rufael, Y. (2009). Re-examining the financial development and economic growth nexus in Kenya. *Journal of Economic Modelling*, 26, 1140-1146.
- Woon, G. C., & David, D. (2005). *Stock market liquidity and the macro economy: Evidence from Japan*. International Monetary Fund Institute IMF Working Paper.