



A weighted least squares analysis of globalisation and the Nigerian stock market performance

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HIGHLIGHTS :

1. The paper studies the impact of globalization on the performance of Nigerian stock market.
2. The window of study is 1981 to 2011.
3. The weighted least square method has been applied using the stochastic characteristics of each time series variable with Im, Pesaran and Shit framework.
4. The study reveals that globalization variables actually positively impacted on stock market performance. However, the findings reveal that while net capital inflows and participation in international capital market have greater impact on the Nigerian Stock market performance during the period under review.

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ABSTRACT

The study empirically investigates the impact of globalization on the performance of the Nigerian Stock market. The study seeks the verification of the existence of a linking mechanism between globalization through trade openness, net inflow of capital, participation in international capital market and financial development on Stock Market performance over the period of 1981 to 2011. The methodology adopted examines the stochastic characteristics of each time series by testing their stationarity using the Im, Pesaran and Shin W-stat test. The weighted least squares regression method was employed to ascertain the different level of impacts on the above subject matter. The findings were reinforced by the presence of a long-term equilibrium relationship, as evidenced by the cointegrating equation of the VECM. The Model ascertained that globalization variables actually positively impacted on stock market performance. However, the findings reveal that while net capital inflows and participation in international capital market have greater impact on the Nigerian Stock market performance during the period under review. Accordingly, it is advised that in formulating foreign policy, policy makers should take strategic views on the international economy and make new creative policies that will foster economic integration between Nigeria and its existing trade allies. These creative policies will also assist to create avenues for the making new trade agreements with other nations of the world, which hitherto were not trade partners with Nigeria.

Keywords:

Globalisation;
Performance;
Stock market;
Weighted least squares.

JEL Classification:

E54; F03; H05; H10.

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1.0 Introduction

Financial Markets have become more integrated in the past decades owing to improvements in technological advances and financial innovations. Financial institutions including Banks and institutional investors have expanded their financial activities across geographical borders acting as intermediaries to channel funds from lenders to borrowers across national borders. A more sophisticated dimension has been assumed in the security markets where newly issued securities are now designed and offered to the public in such a way as to maximize

their appeal to international investors (Issing, 2000). This trend in globalization systematically progressed into the disintegration of restrictions on cross-border financial flows leading to the liberalization of national financial markets more generally. This development has resulted in more attractive options in terms of financial investment opportunities that are available for investors world-wide. More specifically, it becomes more attractive to the investor with the remarkable expansion in the range of evolving financial products which are often generically christened as “derivative instruments”.

Globalization is driven by advancement in sophisticated telecommunication and technology, with the consequent reduction in distance between economic agents making it possible for domestic markets to emerge into a global system (Omah and Ishmael, 2010). Under this process, economic activities are free from institutional controls and this enhances free market mechanism, private enterprises, open competition, professionalism and excellence in corporate governance. Globalization promotes specialization and application of the principle of comparative advantage on a global scale so as to further develop the entire world’s resources (Mbamali and Okotie, 2003).

Globalization breaks down all barriers, separating nations and continents and thereby making the world a global village. It is a process that unifies the world into a single place (Scholte 1996; Monge, 1998). Globalization is one of the tendons of our time eliciting fundamental changes in the policy structure, management and growth direction of organizations and nation’s world over. In its broader terms, globalization refers to the fact that frontiers have ceased to be the barriers to economic growth.

In the Nigerian case, as with other developing nations, globalization and international integration prompted the government in her wisdom in 1976, to abolish legislations preventing the flow of foreign capital directly into the Nigerian bourse. It is evident that over the years the Nigerian stock exchange has remain effectively an attractive alternative window for long-term investment while cautiously embracing modern technology and improving on best international trading practices.

As capital move around the globe seeking for investment destinations with higher or superior returns at the lowest risk possible, Nigerian stock exchange has therefore been exposed to the global effects of capital flows which have large bearing on the prices of shares listed and traded domestically, the volume of transaction and the overall value of the Stock Market.

The latest wave of financial globalization surpassed not only the ability of governments to react, but also that of financial institutions. The collapse of America’s housing bubble was a key determinant for what has become the most severe and widespread financial crisis since the Great Depression (Cox, 2008). This has prompted the failure of key primary financial institutions, which in the current interconnected financial marketplace set in motion an unparalleled global financial reversal as sources of short term debt rapidly expired. The key turning point for much of the developed world was the collapse of American global financial services firm Lehman Brothers in September 2008. As a result the global economy underwent a period of severe contraction.

The immediate effects of the crisis on African economies have been a tightening of credit, weakening currencies and declining stock markets, especially for some of the major stock exchanges in Africa (ECA, 2008). Consequently, most African countries have suffered decline in exports, trade credits, investments, remittances and tourism receipts. In addition, pressures to recapitalize financial institutions and support other ailing industries may cause donor countries to reduce aid to developing countries, with serious consequences for the African countries that rely on official development assistance to meet their pressing challenges.

It is instructive to note that the vibrant and unprecedented economic growth of the emerging markets of the sub-Saharan Africa (average 6.5%), which became more glaring from early 2001, was however called to question in 2008, no thanks to the global economic and financial meltdown. With the near collapse of Nigerian stock market between 2008 and 2009, Nigeria like other sub-Saharan Africa counterparts, had a taste of the contagion of global economic and financial crises.

Crude oil, the major foreign exchange earner of Nigeria nose-dived from \$147 per barrel in July 2008 to \$47 per barrel in 2009, leading to erosion of foreign exchange reserve and depreciation of Naira. Between 2008 and 2009, the Nigeria stock exchange lost almost 63% of its market capitalization and 67.2% of her all share indexes. The cumulative loss till date (Nov 2012), stands in the neighborhood N6 trillion. This monumental loss of asset value represents the long-term savings of Nigerians; individual investors, corporate entities, foreign investors, institutional investors (including pension funds) and the government.

In line with the fragile improvement in global economic outlooks, most of the stock markets of the industrialized and emerging economic of the world have recovered their lost grounds with some of them surpassing their peak

performances before the meltdown of 2008, including Japan (after 2011, Tsunami) and the sovereign debt ridden Euro zone countries regardless of their perforated and uncoordinated debt solutions. Even in the face of significant improvement in the international crude oil prices (currently fluctuating around \$110), the Nigerian story of recovery has been characterized with wide spread volatility and severe crisis of confidence by market operators. There has been sustained increase in reforms of key industrial sectors in Nigeria. Regulatory reforms in NSE, SEC, CBN, bank recapitalization phase I and II, the creation of AMCON as well as proposed increase in the pension fund equity participation (50% of their portfolio) have not reflected very positively in the Nigerian stock exchange market.

The Nigerian capital market is not by any means spared by the ravaging effects of globalization which is increasingly re-defining domestic politics, policies, culture, social and economic relations as well as government decisions all over the world. In fact, the performance of Nigerian stock market from 2008 till date has made nonsense of most known fundamental and technical analysis for equity investment. In search of answers to the peculiar challenges of the market, most finance and economic analysts are pointing accusing fingers on globalization for this ugly development. In the face of the near collapse of the Nigerian stock market in 2007/2008 and its crawling recovery four year afterwards, it is in the interest of the researcher to seek out the link between globalization and stock market performance in Nigeria.

The main research question that drives this study is: "what extend do globalization variables such as openness of the Nigerian economy, net capital inflows, financial development, real exchange rate / real interest rate parity and participation in international capital market activities determine the performance of the Nigerian Stock market?" The general objective is to empirically investigate the impact these factors on the stock market performance in Nigeria.

The paper is divided into seven sections; the first section gives a general introduction to the phenomenon of globalization and serves as background of the paper stating its problem and its objectives. Section 2 looks into the review of existing and related literature on the topic, while section 3 presents the research estimation strategy. Section 4 discusses the definitional theoretical issues of the variables in the model while section 5 presents the empirical results of the paper. Section 6 is the policy implication and recommendations and finally, section 7 is the conclusion of the study.

2.0 Brief review of literature

Some analysts have commonly used the term globalization to describe the spread and connectedness of production communication and technologies across the world (Edu, 2011). It has also been described as the efforts of the International Monetary Fund (IMF, 1997), the World Bank and others related bodies to create a global free market for goods and services. Giddens (1990), defined globalization as "the intensification of worldwide social relationship which link distance localities in such a way that local happenings are shaped by events occurring many miles away and vice versa".

Joseph (2002) defined globalization as "the closer integration of countries and people of the world ... brought about by enormous reduction of cost of transportation and communication and the breaking down of artificial barriers to flow of goods and services, capital, knowledge, and people across borders". Apparently, Adegbite and Babatunde (2010) believes that globalization refers to "the enhanced integration of world economic activity where such activity consists of increased flows of a greater variety of goods and services, more extensive cross-border, flows of short-term and long-term capital and an increasingly dense and complex network of transnational production networks involving multinational enterprise as well as independent supplier companies". She argues that the drive towards one single global economy is itself embedded in the diversity in human taste, skills, knowledge, natural resources, soil and climate. She is of the opinion that interdependence is a necessity that gives way for freedom of exchange and movement. Hence, globalization is about freedom of capital, goods and services and productive capacities, to move unfettered across national boundaries.

Tony (2012) posited that "*globalization is changing the nature of nation's state as power becomes more diffused and borders more porous. He emphasized that technological changes is reducing the power and capacity of government to control its domestic economy free from external influence*".

The rapid advancements in technology and telecommunication have reduced the cost associated with foreign portfolio and direct investment. Without moving from one location to another, a foreign investor could deploy funds across the globe with the aid of telecommunication facilities. The ease with which capital can be re-deployed to take advantage of better returns often proved adverse for the economies experiencing the outflow. Reductions in transport and communication costs, capital account opening, financial market deregulation and privatization of state enterprises have combined to create a favorable environment for increased capital mobility (Fischer, 1998).

Globalisation is of two main categories: trade and investment integration, and financial integration. While trade and investment globalization concerns multilateral trading and the current account of countries, financial globalization focuses on financial investment flows that is basically on the capital account section of countries.

Financial globalization has resulted in two distinct developments in global finance. In the first place, traditional banking institutions have evolved into financial services firms with new accounts. Additionally, non-bank financial institutions now actively compete with banks both on asset and liabilities sides of the balance sheet thereby blurring the distinction between banks and non-bank financial institutions. Also, the rapid growth in the share of other earning assets in total assets and relative growth in off-balance sheet items have been unprecedented (IMF, 2000)

Globalization has progressed with developments in the world economy. The phenomenon has benefited immensely from multilateral trading and investment arrangements, advancement in technology and communication, and the opening up of trade and investment through liberalization of current and capital account transactions. The concept of globalization has robust theoretical underpinnings. The promotion of free trade across national borders as the bedrock of the wealth of nations was first espoused in the "mercantilist" doctrine of Adams Smith before the emergence of David Ricardo's classical theory of comparative advantage theses.

The neo-classical model of growth was later countered by the radical theorists on the inviolability of trade for ensuring the growth of nations. The radical theorists and the early proponents of development economics were of the view that growth can be internalized. However, recent developments in the world economy have shown that it is futile for countries to isolate themselves in a rapidly integrating world.

Trade theory, as well as closed and open economy macroeconomics, has explained a great deal of the phenomenon that has overwhelmed the world. Globalization has provided the impetus for nations to tailor their development efforts towards competitiveness in order to remain relevant in the emerging global economy. The trade theorists advanced the thesis that trade was essential for the growth of nations. The arguments of this school did not favor autarky, where an economy is closed with little relations with the rest of the world. With the gains by nations from closer interaction in trading activities following the liberalization of current accounts, emphasis has shifted to some minimal capital account liberalization. This means that globalization which is predicated on modern theories of trade is hinged on the classical theory of international trade.

Although the opening up of capital accounts has been slow especially among developing economies, current account liberalization has progressed smoothly. It has often been argued that the more open an economy is, the higher the rate of economic growth. The extent to which an economy is liberalized is influenced by factors such as the strength of the domestic economy, the competitiveness of the external sector, the level of the exchange rate, domestic gross capital formation, among others. Net capital flows are the outcome of imbalances between savings and investment across countries. Both net and gross capital flows respond to economic fundamentals, official policies and financial market imperfections.

According to Kavita (1999) "The huge amount of financial capital available in the developed countries through pension and investment funds could be attracted to the developing countries provided the latter liberalized their markets externally and developed their stock market internally". Capital markets have taken a prominent place in the developing countries financial system during the last decade. The most important measure taken in this regard by developing countries was the opening of their respective stock markets to international investors. This step, taken in the late 1980s or early 1990s, resulted in historically high level of portfolio investment in the emerging markets by global and regional funds. Stock market liberalisation in many developing countries took place during the period 1985 to 1995 when market capitalization of all emerging markets increased by 1,007 percent compared to an increase of 253 percent in the case of developed markets. As a result, the share of emerging markets in the world market capitalization increased from 4 percent in 1985 to 11 percent in 1995.

Similarly, the trading value in these markets increased by 2,189 percent compared to 564 percent increase for the developed markets over the decade. As a result, the emerging markets share in trading volume increased by more than three times, i.e., from 2.7 percent to 8.9 percent in ten years, signaling significant growth in these markets (Husain and Qayyum, 2006). This means that Globalization has generally supported poverty reduction (Dollar and Kraay, 2004).

Fitzgerald (2000) observes that trade is not enough to eradicate poverty but it is pertinent if poor countries are to have any hope of brighter future. He argues that anyone who cares about poverty should think twice about restricting trade as this will impose further hardship on poor people in the developing world.

Foreign equity investment can be beneficial to developing countries because of its risk-sharing characteristics and effects on resource mobilization and allocation. With financial integration, developing countries have become increasingly attractive destinations for international investors who are seeking a higher return than what is available in the developed economies. Stock markets of developing countries have become more, although not fully, integrated with world financial markets, and this increased integration implies a lower risk-adjusted cost of capital, which is possible by diversifying the risk. The correlation between returns of emerging markets (developing markets) with developed markets is lower than the return available in the developed economies, the risk-return profile of the portfolio can be improved (Aggarwal et al., 1999). This has created the prospects of a more efficient worldwide allocation of savings and investment than was possible earlier, when domestic investment in most countries was constrained by domestic savings. Thus, big financial investors in the developed countries, while diversifying their risk, find developing countries a more attractive destination.

In spite of the phenomenal growth of cross-border flows and the rapid progress toward the integration of financial markets, financial globalisation seems to be confined to heavily traded, highly liquid financial assets, while countries' overall investment performance continues to be determined predominantly by their domestic savings rates rather than by net capital inflows. But the highly integrated segment of the capital market is large enough to exercise higher constraints than in the past on the conduct and effectiveness of macroeconomic policies (Fischer, 1998).

Apart from the fact that capital flows, especially when they are destabilizing, can undermine macroeconomic stability, they are important elements to watch because unlike trade flows, they are subject to herd behavior, panics, crashes, destabilizing speculation and self-justifying outflows and currency speculation (IMF 2000). Capital flows are porous and can easily evade municipal control. Thus, the case for capital account liberalization should be cautiously approached for it not to be counterproductive.

The link between stock market performance and economic growth has often generated strong controversy among analysts based on their study of development and emerging markets. The view is that sustained economic development originates, in a nexus that involves entrepreneurship, intangible capital investment and financial intermediation. The stock market easily provide the platform through which long-term funds of the major sectors of the economy comprising households, firms, and government are mobilized, harnessed and made available to various sectors of the economy (Nyong, 1997).

The development of the capital market, and apparently the stock market, provides opportunities for greater funds mobilization, improved efficiency in resource allocation and provision of relevant information for appraisal (Inanga and Emenuga, 1997). More specifically, the Stock market contributes to economic growth through the specific services it performs either directly or indirectly. Notable among the functions of the market are mobilization of savings, creation of liquidity, risk diversification, improved disseminating 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.

3.0 Estimation strategy

Our estimation technique consists of four steps procedures. The first step is the unit root test which involves the determination of the order of integration, using the Im, Pesaran and Shin W-stat test. The second is the impact estimation, using the weighted Least Squares regression method which is run over the sample period 1981-2011. The third aspect is to test for the Cointegration, finally, the Vector Error Correction Model (VECM). We test whether the variables are cointegrated over the sample period and if so, what the cointegrating relation is? The cointegration term is known as the error correction term since the deviation from long-run equilibrium is corrected gradually through a series of partial short-run adjustments Granger and Engle (1987). Haven proved that cointegration is a sufficient condition for an ECM formulation, if variables are non-stationary at level, but cointegrated, their dynamic relationships will be specified correctly by an error correction model.

These tests are to enable us present a good explanation regarding the relationship that exist between the dependent variable, namely; the stock market performance denoted by SMP and the independent variables, include Financial development denoted by FID, net inflow denoted by NIF, openness denoted by OPN, participation in international capital market denoted by PICM, growth in market capitalization denoted by MCP and political instability captured by a dummy denoted by POL. The data set for this paper consists of annual time series from 1981 – 2011 and they were obtained from Central Bank of Nigeria (CBN, 2010 and 2011).

We employ the Weighted Least Squares regression (WLS) model. This choice of the estimation technique is as a result of the fact that weighted least squares model best capture series with known form heteroscedasticity, whose values are proportional to the reciprocals of the error standard deviations. We use the weighted least squares, with

weight series, to correct for the heteroscedasticity. The model performs weighted least squares by first dividing the weight series by its mean, then multiplying all of the data for each observation by the scaled weight series. The scaling of the weight series is a normalization that has no effect on the parameter results, but makes the weighted residuals more comparable to the unweighted residuals. The normalization does imply, however, that the weighted least squares are not appropriate in situations where the scale of the weight series is relevant, as in frequency weighting.

If the heteroscedasticity is known the most straight forward method of correcting heteroscedasticity is by the means of weighted least squares for the estimators thus the obtained are BLUE. We model the heteroscedasticity to obtain more efficient estimates using weighted least squares. Estimation is then completed by running a regression using the weighted dependent and independent variables to minimize the sum-of-squared residuals, in a more general form we write the equation as:

$$S(\beta) = \sum_i w_i^2 (y_i - x_i' \beta)^2 \quad (1)$$

With respect to the k -dimensional vector of parameters β . In matrix notation, let W be a diagonal matrix containing the scaled w along the diagonal and zeroes elsewhere, and let y and X be the usual matrices associated with the left and right-hand side variables. The weighted least squares estimator is

$$b_{WLS} = (X'WX)^{-1} X'W'y \quad (2)$$

And the estimated covariance matrix is

$$\hat{\Sigma}_{WLS} = s^2 (X'WX)^{-1} \quad (3)$$

The weighted summary statistics are based on the fitted residuals, computed using the weighted data:

$$\hat{u}_i = w_i (y_i - x_i' b_{WLS}) \quad (4)$$

Therefore, our model stochastic equation in its empirical forms is specified as follow:

$$SMP = \beta_0 + \beta_1 FID + \beta_2 MCP + \beta_3 NIF + \beta_4 OPN + \beta_5 PICM + \beta_6 POL + \mu \quad (5)$$

We assumed that the heteroscedastic variances σ_i^2 are known. Divide equation (5) through by σ_i to obtain

$$\frac{SMP_i}{\sigma_i} = \beta_0 \left(\frac{1}{\sigma_i} \right) + \beta_1 \left(\frac{FID_i}{\sigma_i} \right) + \beta_2 \left(\frac{MCP_i}{\sigma_i} \right) + \beta_3 \left(\frac{NIF_i}{\sigma_i} \right) + \beta_4 \left(\frac{OPN_i}{\sigma_i} \right) + \beta_5 \left(\frac{PICM_i}{\sigma_i} \right) + \beta_6 \left(\frac{POL_i}{\sigma_i} \right) + \left(\frac{u_i}{\sigma_i} \right) \quad (6)$$

Which for the case of exposition we rewrite equation (6) in a linear form

$$SMP_i^* = \beta_0^* + \beta_1^* FID_i^* + \beta_2^* MCP_i^* + \beta_3^* NIF_i^* + \beta_4^* OPN_i^* + \beta_5^* PICM_i^* + \beta_6^* POL_i^* + u_i^* \quad (7)$$

Where the starred, or transformed, variables are the original variables divided by (the known) σ_i . We used the notation $\beta_0^*, \beta_1^*, \beta_2^*, \beta_3^*, \beta_4^*, \beta_5^*$ and β_6^* the parameter of the transformed model, to distinguish them from the usual OLS parameters $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and β_6 . The purpose of transforming the original model is stated above (Gujarati and Sangeetha, 2007)

For the sake of testing and evaluation of the practical reasonability of the would-be estimated slope parameters, we outline our priori expectation of the sign and magnitude of each included parameter, based on the provisions of theory and the findings of previous studies by scholars with similar interest. Therefore, we expect as priori $\beta_0^*, \beta_1^*, \beta_2^*, \beta_3^*, \beta_4^*$ and β_5^* are positive while only β_6^* is expected to be less than zero.

The above sign ($\beta_i^* > 0$) implies a positive relationship between SMP^* and the coefficients of the independent variables, while sign ($\beta_i^* < 0$) indicate negative relationship. The a-priori assumptions for the above are that all slope parameters are positively significant in explaining stock market performance, except the slope of the political instability dummy. The political instability slope is expected not to be significant but no rigid expectation as to its direction or magnitude.

4.0 Definitional theoretical issues

In our study, some theoretical issues have been analyzed that provide direction in the process of defining measurements to the variables of study. Stock market performance is expressed as a function of globalization and other economic variables driven by Nigeria's relationship with other nations. In functional form, we capture the performance of the Stock Market by the contribution of Stock market year-end capitalization to the national output (GDP). This is estimated as the ratio of Year-on-Year changes in the level of Market Capitalization to GDP.

Stock market performance

This is the percentage change in the market value of listed equities on the domestic stock exchange at the end of every year, measured as a ratio to the GDP. Market Capitalization = share price x the number of shares outstanding. Kavita and Rakesh (2011), in their work on "Impact of globalization on stock market development in India" used changes in market capitalization as a ratio to GDP, to measure size; an independent variable that explains or determines stock market development in India.

Financial development (FID)

It is a measure of the increase in the volume of financial services of the banks, financial intermediaries, financial institutions and financial market, as demonstrated by credit to the private sector of the economy.

$$FID = \frac{\text{Private Sector Credit}}{\text{GDP}} \times 100 \quad (8)$$

Augusto et al., (2006), "stock market development under globalization; whither the gain from reforms?" The trio used Financial Development as one of the independent variables that determines GDP growth in an economy. They found that financial development leads to growth.

Net inflow (NIF)

It is a measure of extent of penetration of foreign capital into an economy. It is also known as private capital flows. It is the ratio foreign direct investment and portfolio investment to gross domestic product.

$$NIF = \frac{(FDI + FPI)}{\text{GDP}} \quad (9)$$

Where FDI is defined as foreign direct investment, FPI is defined as Foreign portfolio investment and GDP is defined as Gross domestic product. Foreign direct investment FDI is net inflow of investment to acquire a lasting management interest (10% or more of voting stock) in an enterprise operating in an economy other than that of the investor. Foreign portfolio investment (FPI) covers transaction in equity securities and debt securities. Durham (1998), absorption capacity studied the effects of foreign direct investment and equity foreign portfolio investment on the growth of economy. He used foreign direct investment (FDI) and foreign equity investment (FEPI) as the independent variables that explains economic growth using data of 80 countries, 1979-1998, he found out that lagged FDI and FEPI do not have direct unmitigated positive effects on growth, but depends on the absorption capacity of the host country with respect to financial and institutional development.

Openness (OPN)

It is a measure of participation of a country in international trade. This is measured by the ratio of the value of imports and exports of a given country to its domestic product.

$$OPN = \frac{(\text{IMP} + \text{EXP})}{\text{GDP}} \quad (10)$$

Where IMP is defined as Value of imports and EXP defined as Value of exports. Feridun et al, (2006), "Analyzing the impact of Globalization on Economic Development in Developing Economies": An Application of Error Correction Modeling (ECM) to Nigeria. The researchers used Trade Openness (OPN) as one of the measures of economic integration which is one of the independent variables with respect to globalization that determines economic growth. They found out that trade openness (OPN) have significant positive effect on Nigerian economic growth in Nigeria.

Participation in international capital market (PICM)

It is a measure of the extent to which a country has been a participant in international capital markets either as a source or a recipient of capital. When a country experiences surplus in its current account it implies that the country has been involved in capital outflow as residents acquire financial assets outside the country. The reverse is the case when deficit is the case.

$$\text{PICM} = \frac{\text{Absolute Value of Current Account}}{\text{GDP}} \times 100 \quad (11)$$

Mercereau (2004), "the role of stock market in current account dynamics: Evidence from the United States". The researcher used stock market performance as an independent variable that determines account current. He found out that stock market is relevant to current account dynamics.

Political instability

This is a qualitative variable that aims to capture the tension and atmosphere of politics and the practice of governance in the country. Political instability takes into consideration all the volatility in government and governance in Nigeria for the years of study. To capture this, we have created a dummy variable to sensitize the model to politics and the political environment of the nation. The dummy system assumes value "1" for periods where we can infer greater stability and zero otherwise. In the specific case of Nigeria, we have taken period of military rule to be politically unstable periods and civil rule periods (from 1999 to date) as a fairly more stable political atmosphere.

5.0 Empirical result analysis

5.01 Stationarity test

From the ADF test statistics, the results in Table 1 show that SMP, FID, MCP, NIF, OPN, PICM and POL were integrated at order one, that is I(1) or they were stationary at first difference. Comparing the variables levels with their first difference (Im, Pesaran and Shin W-stat test) and various probabilities, the test statistics show that the variables are integrated at order of one. All the variables were statistically significant at 1%, 5% and 10% critical values in first difference. The summary of the results in Table 1 shows an existence of unit root. This implies that all the series are non-stationary at levels. Therefore the null hypothesis ($\rho = 1$) is accepted at levels and the null hypothesis ($\rho = 1$) that the series are non-stationary after the first difference is rejected for all the series.

Table 01: Summary of Im, Pesaran and Shin W-stat stationarity test

Null Hypothesis: Unit root (individual unit root process)					
Series: SMP, FID, MCP, NIF, OPN, PICM, POL					
Exogenous variables: Individual effects, individual linear trends					
			Statistic	Prob.**	
Method: Im, Pesaran and Shin W-stat			-14.0993	0.0000	
Im, Pesaran and Shin t-bar			-6.61430		
T-bar critical values ***:			1% level	-2.93400	
			5% level	-2.69400	
			10% level	-2.57400	
Intermediate ADF test results					
Series	t-Stat	Prob.	Order of integration	Max Lag	Obs
D(SMP(-1))	-6.0495	0.0001	I(1)	1	29
D(FID(-1))	-5.6680	0.0004	I(1)	1	29
D(MCP(-1))	-6.9227	0.0000	I(1)	1	28
D(NIF(-1))	-7.9447	0.0000	I(1)	1	29
D(OPN(-1))	-8.2578	0.0000	I(1)	1	29
D(PICM(-1))	-6.1626	0.0001	I(1)	1	29
D(POL(-1))	-5.2949	0.0010	I(1)	1	29
Average	-6.6143				

Source: Researcher's Computation

5.02 Analysis and interpretation of estimated models result

With the integration of the series at order one I(1) or with the stationarity of the variables at first difference, equation (5) could be rewritten as:

$$D(SMP) = \beta_0 + \beta_1 D(FID(-1)) + \beta_2 D(MCP(-1)) + \beta_3 D(NIF(-1)) + \beta_4 D(OPN(-1)) + \beta_5 D(PICM(-1)) + \beta_6 D(POL(-1)) + u \quad (12)$$

With the formulated transformation model we specific the tested equations (7) and (12) in their empirical form as:

$$D(SMP_i^*) = \beta_0^* + \beta_1^* D(FID_i^*(-1)) + \beta_2^* D(MCP_i^*(-1)) + \beta_3^* D(NIF_i^*(-1)) + \beta_4^* D(OPN_i^*(-1)) + \beta_5^* D(PICM_i^*(-1)) + \beta_6^* D(POL_i^*(-1)) + u_i^* \quad (13)$$

Table 02: Summary of Weighted Least Squares Regression Result
Estimation Method: Weighted Least Squares

White Heteroskedasticity-Consistent Standard Errors & Covariance				
	Coefficient	Std. Error	t-Statistic	Prob.
$\hat{\beta}_0^*$	0.012416	0.006672	1.860805	0.0775
$\hat{\beta}_1^*$	0.001085	0.001971	0.550613	0.5880
$\hat{\beta}_2^*$	0.128879	0.018210	7.077559	0.0000
$\hat{\beta}_3^*$	0.181834	0.295666	0.614996	0.5455
$\hat{\beta}_4^*$	-0.117199	0.057517	-2.037640	0.0550
$\hat{\beta}_5^*$	-0.967391	0.145820	-6.634130	0.0000
$\hat{\beta}_6^*$	-0.107764	0.039160	-2.751933	0.0123
Determinant residual covariance		0.001221		
Equation				
$= D(SMP_i^*) = \hat{\beta}_0^* + \hat{\beta}_1^* D(FID_i^*(-1)) + \hat{\beta}_2^* D(MCP_i^*(-1)) + \hat{\beta}_3^* D(NIF_i^*(-1)) + \hat{\beta}_4^* D(OPN_i^*(-1)) + \hat{\beta}_5^* D(PICM_i^*(-1)) + \hat{\beta}_6^* D(POL_i^*(-1))$				
Weighted Statistics				
R-squared	0.841704	Mean dependent var		0.005370
Adjusted R-squared	0.778386	S.D. dependent var		0.089397
S.E. of regression	0.042084	Sum squared resid		0.035422
Durbin-Watson stat	2.625564			

Source: Authors' Computation

A look at the regression result in Table 2 above indicates general conformity of the result with the priori expectation that stock market performance is positively related to financial development, market capitalization growth, and net inflow. However, the result of openness and participation in international capital market go contrary to priori expectation by recording negative coefficients. The result of political instability moves in tandem with priori expectations by recording a negative coefficient.

From the estimated result, it can be interpreted that if FID, MCP, and NIF increase by one percent, Stock Market performance will increase by 0.001%, 0.13% and 0.18% respectively. Also, if OPN, PICM and POL increase by one percent, Stock Market Performance will decline by 0.12%, 0.97% and 0.11%, respectively. Although, the negative result of OPN and CIPN does not conform to priori expectations, it is a reflection of the unique characteristics of the Nigerian economy as a developing Country.

In explaining the coefficient of Trade Openness (OPN), we observe that the Nigerian economy is import dependent (especially in relation to manufacturing inputs). The country has recorded huge volumes of imports in comparison with very minimal values for exports over the years. This explains the negative coefficient of OPN in our result. Along the same line, the country cannot boast of major investors for international capital market activities.

The Nigerian economy witness's huge inflow of funds for the purposes of investment in capital market opportunities in exchange for very limited amount of funds exported for investment opportunities in foreign capital market activities. Therefore, the country's direction of net-inflows of investible funds for capital market activities accounts for the negative coefficient that is recorded for OPN in our analysis. Also, in years of more political stability, Market Performance adds about 90 basis points in growth, as shown by the slope of the political instability

dummy included in the regression. While noting that the variable with the least (weakest) impact on stock market performance is Financial Development (FID), the one with the strongest significant impact is Participation in International Capital Market (PICM).

The reported column for t-statistics in the results showed that all included independent variables are important variables in determining of Stock Market performance except Financial Development (FID) and Net inflow (NIF). It implies that four (4) of our proxies for Globalization are significant in the explanation of stock market performance. This is as a result of the t-statistics as shown on table 2 which sits comfortably above the rule of thumb value (2). The t-statistic, which is computed as the ratio of an estimated coefficient to its standard error, is used to test the hypothesis that a coefficient is equal to zero. To test our hypothesis we used the probability (p-value) of observing the t-statistic given that the coefficient is equal to zero. For this study we are performing the test at the 1% and 5% significance level, that is, a p-value that ranges between 0.01 - 0.05 are taken as evidence to reject the null hypothesis of a zero coefficient ($H_0: \beta_1 = \beta_2 = \beta_3 = \dots = \beta_6 = 0$) and accept the alternative (H_1) ($H_1: \beta_1$ to $\beta_7 \neq 0$).

R^2 shows that about 84% (and Adjusted R^2 of 78%) of the total variations in the Stock Market performance are accounted for by Globalization. The F-Statistic is 7.87 with a probability of making a type1 error standing at 0. With a large value for F-Statistic and no probability of errors, it passed the significant test at the 1% level of significance. The result tends to suggest that the overall fit of the regression equation is good. From the result Durbin-Watson(d^*) Statistic 2.63 is greater than 2 (the rule of thumb benchmark for absence of autocorrelation), but lies between the critical upper and lower bounds of the DW statistic, given the sample size of 30 data points and 7 estimated parameters. This is a zone of indecision for the DW test of first order serial correlation.

5.03 Analysis of cointegration test results

The purpose of the co-integration test is to determine whether a group of non-stationary series is cointegrated or not. As explained below, the presence of a cointegrating relation forms the basis of the VEC specification. The unrestricted estimate of Johansen' cointegration rank test establishes whether there exists linear long-run economic relationship between or among the variables, with an assumption of a linear deterministic trend in data. The summary of the Johansen' cointegration tests are presented in Appendix 1.

Appendix 1 showed the estimation of the Johansen co-integration relation among the variables.

The first part shows the hypothesized number of cointegrating equations. The trace test indicates only three cointegrating equation at the 10%. The second parts of the outputs provide estimates of the co-integrating relations β (unrestricted cointegrating coefficients) and unrestricted adjustment Coefficients (α).

As is well known, the co-integrating vector β is not identified unless we impose some arbitrary normalization. The first block reports estimates of β and based on the normalization $\beta^*S11^*\beta = I$, where $S11$, where is defined in Johansen (1995a). Note that the transpose of β is reported under un-normalized co-integrating coefficients so that the first *row* is the first co-integrating vector, the second *row* is the second co-integrating vector, and so on. By imposing one normalization restrictions on the model equations the cointegration equations exactly identifies the system. The test results show that all the variables are pair-wise cointegrated, but with weak evidence that we do have a cointegrating relation and the presence of linear long run equilibrium among the variables.

5.04 Error Correction model and analysis of long-run behavior of the model

The non-stationarity of the series at levels and the cointegration of few series (see Appendix 1) in the model allowed for the specification of the error correction model (ECM), this is in order to capture the long run dynamic relationships in the model. The Error Correction for the long run stock market performance equation is written below:

The Error correction model equation:

$$D(SMP^*) = -0.319(SMP^*(-1) - 1.498 + 0.038FID^*(-1) + 0.007MCP^*(-1) + 0.044NIF^*(-1) + 1.457OPN^*(-1) - 3.365PICM^*(-1) - 0.149POL^*(-1) \quad (13)$$

The implication of the above equation (13) is that, the adjustment coefficient or the speed of adjustment of stock market performance if deviated from its long run equilibrium is 0.32, while the intercept term is negatively related to stock market performance in the long run. Also the error correction estimate equation shows that the long run behavior of financial development, market capitalization, net inflow and openness appear to have positive relationship in adjusting to long-run disequilibrium given the ECM value (0.32) and the long run behavior of participation in international capital market and political instability appear to have negative relationship to the adjust to long-run disequilibrium given the ECM value. The result shows that openness is much statistically

significant in the determination of the grow rate of stock market performance in the long run, since the magnitudes of the variable is positively larger than other explanatory variables.

6.0 Policy implication and recommendations

The deductions that could be made from the empirical findings are predicated on the sizes and magnitude of the slope coefficients of our Regression Result. The estimated regression coefficients imply that globalization and economic integration with other nations have positive impact on the performance of the Nigerian Stock market. This means that Globalisation and other economic variables examined have the capacity to improve the level stock market performance over time in Nigeria. This finding is in line with the position of other scholars concerning the stock market of developing countries (Husain et al, 2006).

The variable with the largest impact on stock market performance during the period of study is Participation in International Capital Market (PICM) activities. Therefore, transactions in the Nigerian stock exchange are greatly influenced by the inflow of foreign investible funds into the Nigerian Capital Market.

The inflow and outflow of investment capital in a country in search of higher returns with minimal risks is also possible because of the support of the Nigeria Government. The Government has taken concrete steps to open up the economy for trade and investment as well as initiate and implement enabling legislation to improve the stock market performance since 1976. The conduct of foreign policy and the initiation of bilateral trade agreements with other countries have all made positive impact on the inflow of private portfolio investment into the Nigerian capital market. (Aigheyisi, 2013) The Government would maintain the trend of policies by seeking new trading partners to further boost the inflow of foreign investible funds into the Nigerian Capital market. Government should also be mindful of tax laws and policies concerning charges on capital importation such that all reviews should take account of trends in the international investment environment.

Among the variables examined in the study, financial development (financial deepening) showed the least impact on stock market performance during the period of study. This implies that the effect of credit from the monetary institutions on the performance of the exchange is weak. The other institutions in the Nigerian financial system are falling short in terms of providing the necessary support by way of liquidity for the effective operations of the Nigerian stock market. The situation also reflects the weak monetized nature of the economy. A large segment of the populace does not pass financial transactions through the Banking system. This large segment of the Nigerian populace did not benefit from the positive growth of the stock market or the impact of globalization (Feridun, et al 2006). This is because their transactions are not part of the financial system. Most of them are engaged in subsistence agriculture and survive on daily earnings. The Central Bank must continue to implement policies to improve the monetization of the economy. More Branches of banks should be located in rural communities and populace should be continuously sensitized on the benefits of Banking, recording and reporting their transactions.

The Central Bank should conduct monetary policies to ease access to credit and improve the liquidity of securities listed on the Exchange. The purpose of investing in equity securities would be defeated if there is no access to liquidity at the point of liquidation. In the effort to ease access to credit and liquidity, the CBN should be cautious of the adverse effect of inflationary pressures in commodity prices. The activities of the stock exchange must be conducted in professional and timely manner using up to date technology. The mechanism for stock listing, daily trading on the floor and transaction reporting among others must be handled to reflect timeliness, effectiveness and efficiency. It should fall in line with international best practices. The Securities and Exchange Commission (SEC) has responsibility for this.

7.0 Conclusion

Nigeria as a member of the global community is predisposed to the effects of globalization. The encouraging performance of the Nigerian stock exchange in the last decade under democracy has made the bourse an investment destination as capital move freely around the globe in search of better lucrative investment options.

It is crystal clear that nowadays, government's actions are either proactive or reactive to global realities and expectations; effecting changes and reforms in key sectors of the economy in expectation of future increase in internationalization of domestic markets and economy. Although Financial Development, Net Inflow, Openness, Participation in International capital Market and political instability have significant positive impact on market capitalization, the place of government policies that serves as drivers to all these independent variables cannot be esteemed lightly.

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Appendix 1

Unrestricted Cointegration Rank Test (Trace)				
Series: SMP* FID* MCP* NIF* OPN* PICM* POL*				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.1% Critical Value	Prob.**
None *	0.910162	185.8360	133.7853	0.0000

At most 1 *	0.722670	115.9534	102.4665	0.0121
At most 2 *	0.676385	78.75949	75.10191	0.0552
At most 3	0.450667	46.04166	51.64971	0.2499
At most 4	0.410566	28.66921	32.06455	0.2029
At most 5	0.221443	13.34001	16.16088	0.2208
At most 6 *	0.189162	6.080912	2.705545	0.0137

Trace test indicates 3 cointegrating eqn(s) at the 0.1 level

* denotes rejection of the hypothesis at the 0.1 level

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

SMP*	FID*	MCP*	NIF*	OPN*	PICM*	POL*
9.494316	0.137674	-0.700053	7.861247	9.906250	-15.19381	0.517450
-20.85007	0.456511	1.807383	26.37799	7.299379	15.11681	0.709288
12.20552	-0.066978	-2.884131	27.83029	10.68666	6.278398	3.362589
-7.568668	0.101680	-3.458454	38.26985	0.725702	1.852922	-1.696106
1.080878	-0.111951	1.999103	66.60843	-9.709404	-0.176770	1.126512
1.555561	0.144765	0.758173	5.140390	-1.722849	14.38013	-3.378833
-0.706236	0.040705	1.731495	12.44368	5.911347	-2.212016	-1.664765

Unrestricted Adjustment Coefficients (alpha):

D(SMP*)	-0.068310	0.014277	0.013272	-0.006363	0.010112	0.000746	0.000659
D(FID*)	0.268455	-1.078795	2.931691	-0.381969	0.071853	0.330840	-0.001370
D(MCP*)	-0.248889	0.047584	-0.051154	0.120485	0.057989	0.005867	-0.077316
D(NIF*)	-0.003906	0.002016	-0.006147	-0.006261	-0.009414	0.000965	-0.003835
D(OPN*)	-0.004397	-0.017631	-0.065075	0.003089	0.010055	0.021887	-0.024519
D(PICM*)	0.004487	-0.005417	-0.023500	-0.005854	0.008267	-0.022409	-0.004571
D(POL*)	-0.029050	-0.100089	-0.006981	0.040748	-0.047621	0.009516	0.032665