
Financial Market Development and Capital Inflows in Nigeria: The Role of Stock Market Development

Nwosa Philip Ifeakachukwu

Department of Economics, Accounting and Finance College of Management Sciences, Bells University of Technology, Ota, Ogun State, Nigeria

Email address:

nwosaphilip@yahoo.com

To cite this article:

Nwosa Philip Ifeakachukwu. Financial Market Development and Capital Inflows in Nigeria: The Role of Stock Market Development. *Journal of Investment and Management*. Vol. 4, No. 6, 2015, pp. 369-376. doi: 10.11648/j.jim.20150406.21

Abstract: This study investigated the relationship between capital inflows and stock market development in Nigeria for the period spanning 1986 to 2013. Capital inflow was proxied by foreign direct investment and foreign portfolio investment while stock market development was proxied by market capitalization, turnover ratio and value traded ratio. The study employed error correction modelling techniques. From the regression estimate, it was shown that only market capitalization and value traded ratio had significant influence on foreign portfolio investment while none of the measures of stock market development significantly influenced foreign direct investment in the long run in Nigeria. The short run estimate showed that among the three measures of stock market development only market capitalization influenced both foreign direct investment and foreign portfolio investment while value traded ratio only had significant influence on foreign direct investment in the short run. The study concluded that stock market development had not significantly promoted the inflows of foreign capital inflow in Nigeria.

Keywords: Market Capitalization, Turnover Ratio, Value Traded Ratio, Foreign Direct Investment, Foreign Portfolio Investment, ECM, Nigeria

1. Introduction

Over the years, the stock market has emerged as a vital aspect of the capital market in emerging economies due to the underdeveloped nature of the banking system in providing long term finance for real sector growth and also as an alternative source for long term finance (Blackburn, Bose & Capasso, 2005; Boyd & Prescott 1986; Oyejide, 2002; Nnana, 2002; Sanusi, 2002; Boyd & Smith, 1998). The stock market enhances investment opportunities of the investors by providing avenues for the sale of securities when the need for cash/liquidity arises and enables investors to alter their choice of asset portfolio. For the business firm, the stock market provides access to long term finance at a reduced cost (Dailami & Aktin, 1990; Kohli, 2003) and enable firms in the undertaking certain very-long term investments which seldom occur due to savers unwillingness to tie-up their investment for a long time (Adenuga, 2011; Greenwood & Smith, 1996).

The existence of a well organized and liquid stock market is a potent incentive to foreign investors which facilitates inflows of foreign capital (Stiglitz, 1985; WIDER, 1990). The high performance of the capital market in terms of increased

volume of market capitalization, turn over ratio and all share price index equally serve as factors capable of pulling capital flows into the capital market of an economy (Otker-Robe et al., 2007). In spite of the potential of the stock market in attracting capital inflows, the underdeveloped nature of the Nigerian stock market in terms of opportunities for portfolio diversification and weak regulatory infrastructures have acted as strong militating factors to the inflows of foreign capital into the Nigeria economy (Ndikumana, 2003; Levine & Zervos, 1998). Despite this constraint, the Nigerian stock market has experienced notable and unprecedented growth over the years. The annual all share index grew from 127.3 in 1986 to 8,111.0 in 2000 and further to 57,990.2 in 2007 before declining to 20,730.5 in 2011 owing to the aftermath of the 2007/2008 global financial crisis. In a similar fashion, the annual market capitalization grew from ₦6.6 billion in 1985 to ₦472.3 billion in 2000 and further to ₦13,294.6 billion in 2007 before declining to ₦9,672 in 2011 owing also to the global financial crisis.

This phenomenal growth experienced in the Nigerian stock market has raised keen concern on the contribution of the stock market on capital inflows in Nigeria, given the gross inadequate domestic savings that have constraint economic

growth in the Nigerian economy. Therefore, understanding the role of the stock market in attracting foreign capital is a topic that warrants cautious enquiry. The perusal of literature showed that little attention has been paid on the relationship between stock market development and capital inflows. The very few studies in this regard include Adam and Tweneboah (2008) in Ghana, Al Nasser and Soydemir (2010) on Latin American countries, and Otchere, et al. (2011). Within the Nigerian economy, plethora of studies has only focused on the relationship between stock market development and economic growth (see Adenuga, 2011; Solarin, 2011; Osinubi & Amaghionyeodiwe, 2003; Nyong, 1997). Despite the substantial quantum of research on stock market separately and capital inflows separately as discussed above, little attention have been paid on the nexus between stock market development and capital inflows.

Apart from the above, this study considered three measures of stock market development (which include market capitalization; turnover ratio and value traded ratio) and two measures of capital inflows (foreign direct investment and foreign portfolio investment¹). To the author's knowledge, no existing study has examined the relationship between stock market development and capital inflows, taking into cognizance the above mentioned measures of the variables. It is against the above background that this study seeks to examine the relationship between stock market development and capital inflows in Nigeria for the period 1986 to 2013.

2. Literature Review

As noted above, the concern on the relationship between stock market development and capital inflows has been a leading issue in the financial literature owing largely to the importance of both investments in the growth of an economy. Some of the literatures that have examined this issue are reviewed herein. In India, Chauhan (2013) examined the impacts of foreign capital inflows on stock market development for the period 2000:1 to 2011:12. Specifically, the study analysed the impacts of Foreign Direct Investment (FDI), Foreign Institutional Investment (FII), and Foreign Portfolio Investment (FPI) inflows on the movement of Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). The study employed Ordinary Least Square, Karl Pearson's correlation and Analysis of Variance techniques. The findings of the study showed that FDI had the greatest effect on both Bombay and National stock exchanges up to 61 per cent and 86 per cent respectively. The Karl Pearson's coefficient of correlation showed that foreign direct investment was highly and positively associated with both the markets with a score of 0.78 and 0.92 respectively. Further, the study observed that FPI had a very low impact on Bombay stock market and a comparative high impact on the National

stock exchange while FII had the least impact on both markets.

Lamouchi and Zouari (2013) examined the role played by the financial development in the influencing capital flows on real effective exchange rates for thirty-eight developed and developing countries for the period 1989 to 2011. Using a dynamic panel co-integration technique, the study observed that in the long run financial development weaken the appreciation effect of capital flows on real effective exchange rates. Through the calculation of the threshold value, the study concluded that from a certain threshold of financial development, capital flows can have a real depreciation effect on exchange rates.

In Pakistan, Zafar (2013) examined the relationship between foreign direct investment and stock market development for the period 1988 to 2008. The study observed a strong positive relationship between the two variables. Also in Pakistan, Syed et al. (2013) examined the impacts of foreign capital inflows and economic growth on stock market capitalization for the period of 1976 to 2011. Employing an ARDL bound testing co-integration approach the study observed that foreign direct investment, workers' remittances and economic growth have significant positive relationship with the stock market capitalization both in long run and the short run. Using of variance decomposition test, the study also observe bidirectional causal relationship of foreign direct investment and economic growth with stock market capitalization while unidirectional causal relationship was observed from workers' remittances to stock market capitalization.

Nyang'oro (2013) examined the relationship between foreign portfolio flows and stock market performance in Kenya. The study observed that foreign portfolio flows had a significant and positive effect on domestic stock market return and that stock market return is affected by lagged unexpected foreign portfolio flows and not by its contemporaneous value. Oke (2012) examined the relationship between foreign direct investment and stock market capitalization for the period 1981 to 2010. Employing co-integration and error correction modelling techniques, the study observed a positive relationship between foreign direct investment and stock market capitalization in short run while in the long run the study failed to establish any relationship between foreign direct investment and stock market development in Nigerian.

Vagias and van Dijk (2011) examined the nexus between international capital flows and local market liquidity for a group of forty-six countries in six regions for the period 1995:1 to 2008:12. Utilizing a vector auto-regressive technique, the study observed that international capital flows to developed Europe and Asia/Pacific positively responded to local market liquidity, while U.S. market liquidity positively predicted international capital flows to developed and emerging Europe and emerging Asia.

Kaleem and Shahbaz (2009) examined the impact of foreign direct investment on stock market capitalization in Pakistan for the period 1971 to 2006. Employing an Error Correction Modelling (ECM) technique and an Auto

1 In recent times, foreign portfolio investments have become highly visible and often dominant components of foreign capital inflows with the rise of foreign institutional investors (FIIs) and sovereign wealth funds on the horizon that seeks to make quick returns through short term speculative activities abroad (Kumar, 2010; Kohli, 2003).

regressive distributed lag (ARDL) bound testing approach, the study observed a positive and significant impact of foreign direct investment on stock market capitalization both in the long and short run. Kim and Yang (2008) investigated the impacts of capital inflows on asset prices by employing a panel VAR model. The study observed that capital inflows contributed to asset price appreciation while shocks to capital inflow only explained a relatively small part of asset price fluctuations.

Hau and Rey (2006) examined the relationship among exchange rates, equity prices and capital inflows for seventeen OECD countries. The study developed an equilibrium model in which exchange rates, stock prices, and capital flows were jointly determined under an incomplete foreign exchange (forex) risk trading. The study noted that incomplete hedging of forex risk, documented for U.S. global mutual funds, induces equity price and capital flow dynamics: Higher returns in the home equity market relative to the foreign equity market were associated with indigenous currency depreciation. Further, net equity flows into the foreign market were positively correlated with a foreign currency appreciation. The study also observed that correlation was strongest after 1990 especially for countries with higher equity market capitalization relative to GDP, suggesting that the observed exchange rate dynamics is indeed related to equity market development.

Kohli (2003) conducted a preliminary analysis of the impact of capital flows on domestic financial sector in India. The study observed that foreign capital inflows had significant impact on domestic money supply and stock market growth. However, the banking sector remained relatively insulated to foreign capital inflows due to policy responses of the central bank and barriers to direct capital inflows into the banking system. Singh and Weisse (1998) examined the relationship between stock market development, capital flows and long term economic growth in emerging economies. The study concluded that stock market development and portfolio capital inflows in the era of financial liberalization are unlikely to assist developing and emerging economies in achieving speedier industrialization and faster long term economic growth. The study recommended that developing and emerging market economies should promote bank based systems, influence the scale and composition of capital inflows and prevent a market for corporate control from emerging.

From the above reviewed literature, it was apparent that most studies dominate on the impact of capital inflows (with particular focus on foreign direct investment) on stock market development (with particular reference to market capitalization) while only a few examine the role of stock market development in attracting capital inflows. Furthermore, previous studies paid little attention on other types of capital inflows (such as foreign portfolio investment) and equally paid little attention to other measures of stock market development (such as turnover ratio and value traded ratio) which measure the liquidity of the stock market (Levine & Zevros, 1998)

3. Research Methodology

3.1. Model Specification

To examine the relationship between capital inflows and stock market development, this study specifies a simple model with suggested explanatory variables from the literature influencing capital inflows in a developing economy like Nigeria. This model is given as:

$$FCI_t = \alpha_0 + \alpha_1(STK)_{it} + \alpha_2(WIR)_t + \alpha_3(EG)_t + \alpha_4(OPEN)_t + \alpha_5(IRT)_t + \alpha_6(EXT)_t + \varepsilon_t \quad (1)$$

World interest rate (*WIR*) is included in the model to account for changes in global macroeconomic conditions. A fall in the world interest rate can spur cross-country capital flows as foreign investors from developed countries can borrow at low cost in their home currency and invest in riskier and high yielding assets abroad (Vagias & van Dijk, 2011). Economic growth (*EG*) has been identified by studies as an important pull factor of capital inflows into an economy (see Obida & Abu, 2010; Ewe-ghee, 2001). Domestic interest rate also plays an important role in influencing the capital inflows. Higher domestic interest in a domestic economy acts as pull incentive for foreign investors seeking higher return on their investment (De Paula, Ferrari & Gomes, 2012). Finally, Walsh and Yu (2010) and Blonigen (2005) identified exchange rate as an important factor influencing the inflow of foreign capital into a domestic economy.

3.2. Variable Measurement and Sources

In line with the focus of this study, capital inflow (*FCI*) is proxied by (i) foreign direct investment (FDI) measured by the ratio of FDI to GDP; and (ii) foreign portfolio investment (FPI) measured by the ratio of FPI to GDP. Stock market development (*STK*) is proxied by (i) Market capitalisation (*CAP*) measured by the ratio of capital market capitalization to GDP; (ii) turnover ratio (*TUR*) measured by the ratio of trading volume to market capitalization; and (iii) value traded ratio (*VTR*) measured by trading volume to GDP (Brasoveanu et al., 2008; Levine & Zevros, 1998). World interest rate (*WIR*) is measured by the US effective federal fund rate; economic growth (*EG*) is measured the real gross domestic product; and domestic interest rate (*IRT*) is measured by monetary policy rate.

Data on foreign capital inflow, stock market development indicators, real gross domestic product, trade openness and domestic interest rate are sourced from Central Bank of Nigeria (CBN) statistical bulletin 2013 edition while data on world interest rate is sourced from the Federal Reserve Bank of st. Louis statistical bulletin.

4. Empirical Analysis

This study commenced its empirical analysis by providing information on characteristics of variables used in the regression. The descriptive statistics of the variables is provided in table 1 below. From the table, the averages (means)

of the variables are 0.55, 0.26, 4.33, 0.06 and 0.38 for foreign direct investment (FDI), foreign portfolio investment (FPI), market capitalization (MCAP), turnover ratio (TUR) and value traded ratio (VTR) respectively while the averages of the remaining variables: world interest rate (WIR), economic growth (EG), domestic interest rate (IRT), and exchange rate (EXT) are 4.14, 12.86, 13.81 and 73.74 respectively. The standard deviation showed that exchange rate (60.29) was the most volatile variable in the time series while turnover ratio (0.04) was the least volatile variable.

The skewness statistic from table below revealed that with exception to world interest rate (WIR) which was negatively skewed, the other remaining variables were positively skewed. The kurtosis statistics showed that foreign direct investment

(FDI), world interest rate (WIR), economic growth (EG) and exchange rate (EXT) were platykurtic, suggesting that their distributions were flat relative to normal distribution. Conversely, foreign portfolio investment (FPI), market capitalization (MCAP), turnover ratio (TUR), value traded ratio (VTR) and domestic interest rate (IRT) are leptokurtic, suggesting that their distributions are peaked relative to normal distribution. Lastly, the Jarque-Bera statistic rejected the null hypothesis of normal distribution for foreign portfolio investment (FPI), market capitalization (MCAP) and value traded ratio (VTR) at five per cent critical value while the null hypothesis of normal distribution for the other variables were accepted at the same critical value.

Table 1. Descriptive Statistics.

Variables	FDI	FPI	MCAP	TUR	VTR	WIR	EG	IRT	EXT
Mean	0.551	0.259	4.328	0.061	0.383	4.137	12.858	13.812	73.741
Median	0.366	0.045	0.973	0.060	0.046	4.960	12.651	13.500	92.693
Maximum	1.772	3.023	20.961	0.176	2.498	9.220	13.698	26.000	157.499
Minimum	0.004	-0.041	0.033	0.010	0.001	0.100	12.230	6.130	2.020
Std.Dev.	0.558	0.608	6.025	0.038	0.610	2.611	0.462	4.128	60.289
Skewness	0.835	3.720	1.383	0.740	2.013	-0.081	0.428	0.678	0.046
Kurtosis	2.323	17.173	3.700	4.053	6.812	2.067	1.802	4.265	1.210
Jarque-Bera	3.657	288.275	9.162	3.710	34.585	1.008	2.440	3.866	3.616
Probability	0.161	0.000	0.010	0.156	0.000	0.604	0.295	0.145	0.164
Sum	14.871	7.005	116.856	1.652	10.350	111.690	347.159	372.940	1991.02
Sum Sq. Dev.	8.094	9.607	943.865	0.038	9.683	177.365	5.542	442.969	94502.5

4.1. Unit Root and Lag Selection Criteria

To avoid spurious regression estimates, the unit root or stationarity tests on the variables were carried out using the Phillip-Perron (PP) and the results are presented on table 2 below. From the table it was observed that all the variables were integrated of order one, suggesting that the variables were I(1) series. Sequel to the unit root test and before estimating of the co-integration estimates, the maximum numbers of lags (for the two models to be estimated) was determined using the Akaike criterion (AIC), Schwartz Bayesian Criterion (BIC) and Hannan-Quinn Criterion (HQC). The result of the lag selection criteria was presented in table 3 below. From the table, a unanimous number lags which is two (2) was reported by the three lag selection criteria.

Table 2. Unit Root.

Variables	Phillips Perron Test			
	Level	1st Diff	2nd Diff	Status
FDI	-0.9398	-8.5517*	-	I(1)
FPI	3.1588	-5.3534*	-	I(1)
MCAP	-0.1615	-5.8197*	-	I(1)
TUR	-1.9628	-7.1815*	-	I(1)
VRO	-1.1467	-5.3885*	-	I(1)
WIR	-1.1467	-3.0489**	-	I(1)
EG	1.0834	-3.4254**	-	I(1)
IRT	-2.7644	-10.6579*	-	I(1)
EXT	-0.4032	-4.8447*	-	I(1)

Note: * and ** denotes 1% and 5% respectively.

Table 3. Lag Selection Criteria.

Lags	loglik	p(LR)	AIC	BIC	HQC
FDI, MCAP, TUR, VRO, WIR, EG, IRT and EXT					
1	16.5252		-06841	-0.2378	-0.5710
2	23.0408	0.0003	-1.1855*	-0.6896*	-1.0687*
FPI, MCAP, TUR, VRO, WIR, EG, IRT and EXT					
1	15.3740		-0.5795	-0.1331	-0.4743
2	18.1822	0.0178	-0.7438*	-0.2479*	-0.6270*

Source: Author, 2014.

Note: The asterisks below indicate the best (that is, minimized) values of the respective information criteria. AIC is Akaike criterion; BIC is Schwartz Bayesian Criterion and HQC is Hannan-Quinn Criterion.

4.2. Co-integration Estimate

Sequel to the above preliminary tests and given that the model to be estimated is multivariate, this study employed the Johansen co-integration test owing to the possibility of having more than one co-integration vector. The results of the Trace and Maximum Eigen tests presented on table 4 below clearly showed the presence of co-integration among the variables. For the FDI model, the trace test rejected the null hypothesis of no co-integration for $r=0$ to $r \leq 5$ at five percent critical values while the null hypothesis of no co-integration for $r \leq 6$ at five percent critical value could not be rejected. This is because the statistic value at $r \leq 6$ was less than the critical value at five percent. The Maximum Eigen test for the FDI model also rejected the null hypothesis of no co-integration for $r=0$ to $r \leq 2$ at five percent critical values while the null

hypothesis of no co-integration for $r \leq 3$ at five percent critical value could not be rejected. While respect to the FPI model, the trace test rejected the null hypothesis of no co-integration for $r=0$ to $r \leq 5$ at five percent critical values while the null hypothesis of no co-integration for $r \leq 6$ at five percent critical value could not be rejected. The Maximum Eigen test for the FPI model also rejected the null hypothesis of no

co-integration for $r=0$ to $r \leq 4$ at five percent critical values while the null hypothesis of no co-integration for $r \leq 5$ at five percent critical value could not be rejected. The above co-integration estimates suggest that the linear combination of the variables in equation (1) were stationary and there exists a long run relationship among the variables in both models.

Table 4. Summary of the Co-integration Estimate.

Trace Test				Maximum Eigen value Test			
Null	alternative	Stat. Value	95% critical values	Null	alternative	Stat. Value	95% critical values
MODEL FOR FDI							
$r=0$	$r \geq 1$	442.24	159.53	$r=0$	$r=1$	175.74	52.36
$r \leq 1$	$r \geq 2$	266.51	125.62	$r \leq 1$	$r=2$	124.68	46.23
$r \leq 2$	$r \geq 3$	141.83	95.75	$r \leq 2$	$r=3$	55.67	40.08
$r \leq 3$	$r \geq 4$	86.17	69.82	$r \leq 3$	$r=4$	32.11	33.88
$r \leq 4$	$r \geq 5$	54.06	47.86	$r \leq 4$	$r=5$	22.20	27.58
$r \leq 5$	$r \geq 6$	31.86	29.80	$r \leq 5$	$r=6$	18.60	21.13
$r \leq 6$	$r \geq 7$	13.26	15.49	$r \leq 6$	$r=7$	13.20	14.26
MODEL FOR FPI							
$r=0$	$r \geq 1$	499.34	159.53	$r=0$	$r=1$	178.24	52.36
$r \leq 1$	$r \geq 2$	321.11	125.62	$r \leq 1$	$r=2$	126.90	46.23
$r \leq 2$	$r \geq 3$	194.21	95.75	$r \leq 2$	$r=3$	74.78	40.08
$r \leq 3$	$r \geq 4$	119.43	69.82	$r \leq 3$	$r=4$	43.85	33.88
$r \leq 4$	$r \geq 5$	75.58	47.86	$r \leq 4$	$r=5$	42.40	27.58
$r \leq 5$	$r \geq 6$	33.17	29.80	$r \leq 5$	$r=6$	18.05	21.13
$r \leq 6$	$r \geq 7$	15.12	15.49	$r \leq 6$	$r=7$	11.98	14.26

Source: Authors' computation, 2013.

4.3. Long Run and Short Run Estimates

The long run estimate on the relationship between foreign direct investment and stock market development with other explanatory variables (see table 5) showed that market capitalization (MCAP), turnover ratio (TUR), domestic interest rate (IRT) and exchange rate (EXT) had negative and insignificant effect on the inflow of foreign direct investment in Nigeria. In contrast value traded ratio (VRO) and world interest rate (WIR) had positive but insignificant effect on the inflow of foreign direct investment while only economic growth (EG) had positive and significant effect of foreign

direct investment. Specifically, a unit increase in real economic growth will promote the inflow of foreign direct investment in Nigeria by 3.14 per cent. The insignificant effect of the three measure of stock market development (that is MCAP, TUR, and VRO) on the inflow of foreign direct investment clearly showed that despite the impressive performance of the Nigerian stock market over the years, the stock market had not played a noteworthy role in attracting foreign direct investment in the Nigerian in the long run. This finding is in contrast to the findings of Zafar (2013) and Syed et al. (2013).

Table 5. Long Run Estimate of the Impact of Stock Market Development on Capital Inflows in Nigeria.

EXPLANATORY VARIABLES							
FDI MODEL	MCAP	TUR	VRO	WIR	EG	IRT	EXT
Coefficient	-0.0206	-0.5707	0.2321	0.0152	1.2042	-0.023	-0.0007
t-value	-0.8814	-0.2626	1.0817	0.5624	3.1324*	-1.9318	-0.2924
R-Squared = 0.92; F-Stat. = 31.94 (p<0.05); D-W Stat. = 2.81							
FPI MODEL	MCAP	TUR	VRO	WIR	EG	IRT	EXT
Coefficient	0.1653	3.2017	-1.2064	-0.0292	0.5692	0.0248	-0.0048
t-value	3.1347*	0.6515	-2.4867**	-0.4778	0.6548	0.9220	-0.9491
R-Squared = 0.66; F-Stat. = 5.33 (p<0.05); D-W Stat. = 1.86							

Note: * and ** implies 1% and 5% respectively.

With respect to the foreign portfolio investment model, evidence from table 5 showed that world interest rate (WIR) and exchange rate (EXT) had negative and insignificant effect on the inflow of foreign portfolio investment in Nigeria while value traded ratio also had negative but significant effect on

the inflow of foreign investment in Nigeria. Contrarily, turnover ratio (TUR), economic growth (EG), and domestic interest rate (IRT) had positive but insignificant effect on the inflow of foreign portfolio investment while market capitalization had positive and significant effect on the inflow

of portfolio investment in Nigeria. The import of the above analysis on the relationship between foreign portfolio investment and stock market development showed that different measures of stock market development had differential impact on foreign portfolio investment. While stock market capitalization exerted a positive effect on foreign portfolio investment, value traded ratio had negative influence on the inflow of foreign portfolio investment in Nigeria in the long run. This finding is in contrast to the one obtained by Nyang'oro (2013).

In addition to the long run regression estimate, the short run estimate on the relationship between foreign direct investment and stock market development is presented in table 6 below.

Table 6. Short Run Estimate of the Impact of Stock Market Development on Foreign Direct Investment in Nigeria.

EXPLANATORY VARIABLES					
FDI MODEL	ECM_{t-1}	ΔIRT	$\Delta MCAP(-1)$	ΔVRO	ΔWIR
Coefficient	-1.0275	-0.0088	0.0466	-0.3330	0.0366
t-value	-6.4236*	-1.5753	3.8758*	-3.7656*	2.2394**
R-Squared = 0.85; F-Stat. = 22.06 (p<0.05); D-W Stat. = 2.18					

Note: * and ** implies 1% and 5% respectively.

Table 7 below presents the short run estimate on the relationship between foreign portfolio investment inflows and stock market development. From the table, the coefficient of the error correction term was correctly negatively signed (-2.23) and statistically significant. The coefficient estimate of the error correction term implied that the model corrects its short run disequilibrium by more than 100 per cent speed of adjustment in order to return to the long run equilibrium. The first lagged value of foreign portfolio investment had a

positive and significant effect on current foreign portfolio investment in the short run while domestic interest rate and the first lagged value of value traded ratio had positive but insignificant effect on current foreign portfolio investment. The first lagged value of market capitalization had negative but statistically significant effect on current foreign portfolio investment while current value of exchange rate had negative insignificant effect on foreign portfolio investment in the short run.

Table 7. Short Run Estimate of the Impact of Stock Market Development on Foreign Portfolio Investment in Nigeria.

EXPLANATORY VARIABLES						
FPI MODEL	ECM_{t-1}	$\Delta FPI(-1)$	ΔEXT	ΔIRT	$\Delta MCAP$	$\Delta VRO(-1)$
Coefficient	-2.2393	1.8294	-0.0082	0.0329	-0.3775	1.0611
t-value	-2.9816**	2.7525**	-1.2566	1.2797	-2.9134**	1.8699
R-Squared = 0.58; D-W Stat. = 1.59						

Note: * and ** implies 1% and 5% respectively.

5. Conclusion and Policy Recommendation

This study investigated the relationship between capital inflows (foreign direct investment and foreign portfolio investment) and stock market development in Nigeria for the period 1986 to 2013. Capital inflow was proxied by foreign direct investment and foreign portfolio investment while stock market development was proxied by market capitalization, turnover ratio and value traded ratio. From the regression estimate, it was shown that only market capitalization and value traded ratio had significant influence on foreign portfolio investment while none of the proxies for stock market development significantly influenced foreign direct investment in the long run in Nigeria. The short run estimate showed that among the three measures of stock market

development only market capitalization influenced both foreign direct investment and foreign portfolio investment while value traded ratio only had significant influence on foreign direct investment in the short run. Drawing from the findings of the study, it was concluded that stock market development have not significantly promoted the inflow of capital inflow in Nigeria. Thus, there is the need government to do more in terms of financial market regulation (with particular reference to stock market development) that will guarantee and ensure increased inflow of foreign capital into the Nigeria economy.

References

- [1] Adam, A. M., & Tweneboah, G. (2008). Foreign direct investment (FDI) and stock market development: Ghana evidence. MPRA Paper No.11985.

- [2] Adenuga, A. O. (2011). Stock market development and economic growth in Nigeria: a vector error-correction approach. *West African Journal of Monetary and Economic Integration*, 11(1), pp.95-124.
- [3] Al Nasser, O. M., & Soydemir, G. (2010). Domestic and international determinants of foreign direct investment in Latin America. FMA Annual Meeting, New York, USA.
- [4] Blackburn, K., Bose, N., & Capasso, S. (2005). Financial development, financing choice and economic growth. *Review of Development Economics*, 9(2), 135-149.
- [5] Blonigen, B. (2005). A Review of the Empirical Literature on FDI Determinants, *NBER Working Paper* No. 11299.
- [6] Boyd, J., & Prescott, E. C. (1986). Financial Intermediary Coalitions. *Journal of Economic Theory*, 38, pp. 211-232.
- [7] Boyd, J., & Smith, B. (1998). The Co-evolution of the Real and Financial Sectors in the Growth Process. *The World Bank Economic Review*, Vol. 10 No.2, 371-396.
- [8] Brasoveanu, L. O., Dragota, V., Catarama, D., & Semenescu, A. (2008). Correlations between Capital Market Development and Economic Growth. The Case of Romania. *Journal of Applied Quantitative Methods*. 3(1), pp. 64-75.
- [9] Chauhan, S. (2013). Impact of Foreign Capital Inflows on Indian Stock Market, *TRANS Asian Journal of Marketing & Management Research*, 2(3-4), pp.79-90.
- [10] Dailami, M., & Aktin, M. (1990). "Stock markets in developing countries: key issues and a research agenda". Policy Research and External Affairs Working Papers Series, No. 515. Financial Policy Systems, the World Bank.
- [11] De-Paula, L. F., Ferrari-Filho, F., & Gomes, A. M. (2012). Capital flows, international imbalances and economic policies in Latin America, Retrieved on January 13, 2013 from http://www.ufrgs.br/PPGE/pcientifica/2012_12.pdf.
- [12] Ewe-Ghee, L. (2001). Determinants of and the relation between, foreign direct investment and growth: a summary of the recent literature, *IMF Working paper*, WP/01/175.
- [13] Greenwood, J., & Smith, B. (1996). Financial markets in development and the development of financial markets. *Journal of Economic Dynamics and Control*, 21, 145-181.
- [14] Hau, H., & Rey, H. (2006). Exchange Rates, Equity Prices and Capital Flows, *The Review of Financial Studies*, 19(1), pp. 273-317.
- [15] Kaleem, R., & Shahbaz, M. (2009). Impact of Foreign Direct Investment on Stock Market Development: The Case of Pakistan. *9th Global Conference on Business and Economics*, Cambridge University, UK.
- [16] Kim, S., & Yang, D. Y. (2008). The Impact of Capital Inflows on Asset Prices in Emerging Asian Economies: Is Too Much Money Chasing Too Little Good? *Working Paper Series On Regional Economic Integration* Asian Development Bank (ADB) No. 15.
- [17] Kumar, N. (2010). Capital flows and development: lessons from South Asian experiences, Macroeconomic Policy and Development Division (MPDD) Working Paper Series, WP/10/11.
- [18] Kohli, R. (2003). Capital Flows and Domestic Financial Sector in India, *Economic and Political Weekly*, February 22, pp. 761-767.
- [19] Lamouchi, A., & Zouari, E. (2013). Financial Development and Capital Inflows: The effect on the real exchange rate, *Global Journal of Management and Business Research Finance*, 13(3), pp. 30-42.
- [20] Levine, R., & Zervos, S. (1998). Stock Market, Bank and Economic growth: *American Economic Review* 88(3), 537-558.
- [21] Ndikumana, L. (2003). Capital Flows, Capital Account Regimes, and Foreign Exchange Rate Regimes in Africa. *Working Paper Series* No. 55, Political Economy Research Institute (PERI), University of Massachusetts Amherst.
- [22] Nnanna J. O. (2002). Monetary Policy and Exchange rate Stability: A general overview: Proceedings of Nigeria Economic Society's One-day seminar held Lagos.
- [23] Nyang'oro, O. (2013). Foreign Portfolio Flows and Stock Market Performance in Kenya: Case of Nairobi Securities Exchange, *An extracted from my thesis submitted to the University of Nairobi, Kenya*.
- [24] Nyong, M. O. (1997). Capital market development and long-run economic growth: theory, evidence and analysis. *First Bank Review*, December, pp.13-38.
- [25] Obida, G. W., & Abu, N. (2010). Determinants of foreign direct investment in Nigeria: an empirical analysis, *Global Journal of Human Social Sciences*, 10(1), 26-34.
- [26] Oke, M. O. (2012). Foreign Direct Investment and the Nigerian Financial Sector Growth, *Asian Economic and Financial Review*, 2(2), pp.262-275.
- [27] Osinubi, T. S., & Amaghionyeodiwe, L. A. (2003). Stock Market Development and Long-run Growth in Nigeria, *Journal of African Business*, 4(3): 103-129.
- [28] Otchere, I., Soumare, I., & Yourougou, P. (2011). "FID and financial market development in Africa" [On line] Available at: http://www.uneca.org/sites/default/files/page_attachments/sou_mare_and_otcherel-fdi_and_financial_market_development_in_africa_0.pdf [Retrieved September 28, 2013].
- [29] Ötoker-Robe, İ., Polański, Z., Topf, B., & Vávra, D. (2007). Coping with Capital Inflows: Experiences of Selected European Countries, IMF Working Paper, WP/07/190.
- [30] Oyejide T. A. (2002). Monetary Policy and its Effects on the Nigerian Economy: *Proceedings of Nigeria Economic Society's One-day seminar held Lagos*.
- [31] Sanusi J. O. (2002). "Central Bank and the Macroeconomics' Environment in Nigeria". A Lecture Delivered at *Senior Executive course No 24 Institute for Policy and Strategy Studies*.
- [32] Solarin, S. A. (2011). "Financial development and economic growth: the role of stock markets and banking sector in Nigeria". *Journal of Sustainable Development in Africa*, 13(7), pp. 96-113.
- [33] Singh, A., & Weisse, B. A. (1998). Emerging Stock Markets, Portfolio Capital Flows and Long-term Economic Growth: Micro and Macroeconomic Perspectives, *World Development* Vol. 26(4), pp.607-622.
- [34] Stiglitz, J. E. (1985). Credit Markets and the Control of Capital, *Journal of Money, Credit and Banking*, 71, pp.324-376.
- [35] Syed, A. R., Syed, T. J., & Sahar, A. (2013) Is Stock Market Sensitive to Foreign Capital Inflows and Economic Growth? Evidence from Pakistan, *MPPRA paper* No. 48399.

- [36] Vagias, D., & van Dijk, M. A. (2011). International Capital Flows and Liquidity. [Online] Available at: <http://ssrn.com/abstract=1571858> [Retrieved September 28, 2013].
- [37] Walsh, J. P., & Yu, J. (2010). Determinants of Foreign Direct Investment: A Sectoral and Institutional Approach, *IMF Working Paper*, Asia Pacific Department, WP/10/187.
- [38] WIDER (1990). *Foreign Portfolio investment in Emerging Equity Markets*. Study Group Series, No. 5, WIDER. Helsinki.
- [39] Zafar, M. (2013). Determinants of Stock Market Performance in Pakistan, *Interdisciplinary Journal of Contemporary Research in Business*, 4(9), pp.1017-1026.