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Dynamic Relationship Between External Financial Flows and Total Market Capitalization in The Nigerian Capital Market: VECM Approach

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ABSTRACT: *The study examines the extent to which external financial flows influence market capitalization of Nigerian capital market for the period spanning 1981-2020. The study employed the VECM, regressors' and ECT t-statistics causality approaches to establish the strong, short-run and long-run relationships. The study unveiled that all the external financial flows such as FDI, FPI, remittance and others used in this study have positive impacts on total annual market capitalization in the Nigerian capital market, especially in the long-run. The stock indices movement is respective to the change in external financial flows basic. The study suggested that the policy measures aimed at directing long run capital inflows should not be the same as those aimed at changing the short run patterns of flow. The study concludes that policy should be put in place to ensure the directions of both long run and short run financial flows have a suitable time rage.*

KEY WORDS: external financial, total market capitalization, Nigeria, VECM

JEL Classification: F30, E44, C59

INTRODUCTION

The liberalization of financial market in the early 1990s, has brought about a shift in the volume of capital inflows to emerging nations. Financial inflows to emerging capital markets has witnessed a tremendous level of growth (Cliff, Eddie, and Job, (2020). The development of the capital market will in turn lead to the improvement of the quality and quantity of investments thus stir up the pace of economic growth in emerging nations especially in Nigeria. External financial

flows have gained prominence as the major source of capital for developing countries due to inadequate resources that has hindered and as well as slow down development process. This is based on the fact that saving in this part of the world is usually less than the investment needs, thus financial inflows help to augment savings that will help propel economic growth (Ndem, Okoronkwo & Nwamuo, 2014). Most economies have resorted to foreign borrowings while others geared efforts toward attracting foreign contributions in form of external finance inflow through the capital market to stimulate development. Hence, the importance of external financial flows either by private or public agencies in promoting growth and development in developing countries cannot be overemphasized. Thus, the need to augment the saving-investment gap has given rise to the high demand for external financial flows or foreign capital in developing counties especially Nigeria. Where too much domestic consumption has led to excessive reliance on foreign capital inflows to finance investment.

Consequently, the composition of external financial flows to developing countries in general and Nigeria in particular has shifted from commercial loans to foreign direct investment (FDI) and portfolio investment to other variables such as trade openness, remittances and official development assistance (ODA) (Ndem, et al 2014). Thus, to attract adequate external financial or capital needed for investment, capital market has been identified as one of the veritable means through which foreign investment flows into an economy.

Unarguably, capital market has therefore been identified as one of the key factors that influence the inflow of capital into an economy towards economic growth. It comprises of all financial institutions put in place for dealings in medium and long-term loanable funds (Ekezie, 2002). The capital market is unique because it provides cheap long-term financing as well as the liquidity in the market. However, the level of development of the host country's capital market will go a long way in determining the influx of external capital into such a country (Ozurumba, 2012; Odior, Nwaogwugwu, 2016). To attract adequate foreign capital needed for investment, capital market has been identified as one of the veritable means through which foreign investment flows into an economy. These funds are usually intermediated through the financial market to facilitate domestic investment in the host country. The capital market is unique because it provides cheap long-term financing as well as the liquidity in the market.

However, the imbalance between the required capital and the available saving capability in most developing economies has become a major challenge that has resulted to inadequate domestic investment that has hindered the achievement of desired economic growth. It is noteworthy that external financial flows have become an increasingly imperative source of capital for Nigeria and other emerging economies. The Nigerian economy is an integral part of the global capitalist economy which has experienced a very rapid pace of globalization since the 1980s. This is partly due to the process of financial globalization which has accelerated the international economic integration of the emerging sub- Saharan economies (Osaze, 2011; Alenoghena and Odior**,** 2014).

Despite the fact explicating the importance of external financial flows to capital market growth (Cliff et al. (2020), Akinmulegun (2018), Atiya & Tehseen (2017), Onyeisi et al., (2016), Senbeta (2013), Obadan (2012)), it is expedient to note that Nigerian capital market has performed fairly and some of the challenges bedeviling its capital market include: the buy and hold attit ude of Nigerians, few investment outlets in the market, lack of capital market friendly economic policies and political instability, private sector led economy and less than full operation of recent developments and also due to the non-internationalization. The emerging market has also attracted and embraced the attention and the interest of international investors, thus increasing capital inflow. Statistics from Central Bank of Nigeria (CBN), (2020) revealed that the overall market capitalization rose from N1, 698.1 million naira in 1980 to N16.03trillion naira in 2019, thus indicating a steady growth within the period. The total new issues before 1989 was below N1 billion. However, from 1989 to 1996 it hovered between N1 billion to N10 billion. The amount crossed the N10 billion marks in 1997 (Edame &Okoro, 2013).

Based on the forgoing, this study seeks to investigate the extent to which external financial flows will influence capital market performance in Nigeria proxy as total annual market capitalization. To the best of our knowledge, studies have not examined the link between capital market performance and other external financial inflow in Nigeria. Hence, the paucity of research on the nexus between capital market performance and other external financial inflow in Nigeria in form of trade openness, remittances, and official development assistance (ODA), It is against this back drop that this study seeks to fill this most recent lacuna in the literature. The basic objective of this study is to empirically assess the extent to which external financial flows has gone in boosting market capitalization in the Nigerian capital market. Basically, the study seeks to examine the impact of external financial flows on total annual market capitalization in the Nigerian capital market, while the research question is "What the short and long run causal linkage between the external financial flows and market capitalization?"

The findings from this study revealed that some variables were statistically significant in the short-run and also in the long-run, these joint statistically significance between the variables in the short-run and long-run implies strong causal relationship among the variables. This implies that external financial flows tend to generate unpredictable and atypical influences on long-term capital market development in Nigeria, although it gives little room for short-run development of the market. The remainder of this paper enlisted thus. Section two reviews relevant literature; section three; focus on methodology; section four presents and discusses the results; and section five concludes and provides policy implications.

LITERATURE REVIEW

A succinct Literature Review

This section focuses on the empirical review and theoretical underpinning on the issue of context external financial inflows, total market capitalization and capital market. On the empirical fronts, several large chunks of literature expediting the link between financial inflows and the capital market in developing economies exist. The study will only focus on brief salient documented empirics on the issue of context. It is worthy of note that the major center issue has been the proxy for capital market. Studies like Ajayi, Adejayan & Obalade (2017); Sameh (2017); Adaramola & Obisesan (2015); Subair & Salihu (2013); Lawal & Ijirshar (2013); Ekeocha, Malaolu & Oduh (2012); Ali et al. (2012) focus on how financial inflows impact market capitalization in the capital market. The findings from these studies for different countries all affirms that financial inflows whether FDI, FPI, and remittances, all have positively significant impact on market capitalization

On the other hand, some studies also focus on capturing capital market using All Share Index (ASI). For instance, studies by Gbalam et al. (2020); Cliff et, al. (2020); Anthony & Ogbuabor (2018); Akinmulegun (2018); Nikmanesh (2016); Njoroge (2014); Raza & Jawaid (2014); Zubair (2013) assessed the impact of financial inflows on capital market using All Share Index as a proxy and established those financial inflows had strong and significant positive effect on stock market performance.

So many other studies have also been conducted on foreign investment and capital market in Nigeria. Specifically, studies like Iriobe, Obamuyi & Abayomi (2018); Akinmulegun (2018); Muhammad et al. (2017; Onyeisi, Odo & Anoke (2016); Adaramola and Obisesan (2015); Sulaiman & Mohammed (2014); Baghebo & Apere (2014); Eniekezimene (2013) and established that foreign investment positively and significantly impact capital market in Nigeria.

Contrarily, Odo et al. (2016) investigated the impact of foreign direct investment on stock market growth in Nigeria. Using times series data from 1984 to 2015, the study revealed that there is no causality between foreign direct investment and stock market growth in Nigeria. Their findings also showed that foreign direct investment (FDI) and export have negative relationship with stock market growth both in the long and short run periods, thus, concluded that foreign direct investment has no significant impact on stock market growth within the period of study.

More so, Issahaku et al. (2017) investigated the dynamic and causal linkages among international remittance inflows, banking sector development and stock market development in a large panel of developing countries. The study used two stages least squares and impulse response functions to shed light on the remittance-bank-stock market nexus. And revealed that remittances promote banking sector development in low remittance receiving countries, but not in high remittance

receiving economies. The study also established a bi-causal negative link between stock markets and remittances in countries with developed banking systems. In low remittance recipient countries, remittances decrease stock market development; however, in remittance dependent countries, remittances promote stock market development. Again, stock market development promotes remittance inflows in remittance dependent countries, while obstructing it in low remittance recipient countries.

In the light of the above, the rhetoric and empirics surrounding the impact of FDI, FPI, remittance either on stock and capital market growth or on economic growth is awash in the literature. It is worth noting that the place of trade openness, factors income, remittance and other macroeconomic variables in attracting and capital into the nation's economy has been neglected by researchers in recent time. In other words, little attention has been given by scholars to the study of the impact of other external financial flows and capital market development. With this, the need for empirical investigation to fill the gap cannot be overemphasized. Therefore, this study set out to fill this gap by investigating the impact of other external financial flows on capital market performance Nigeria. The current study addresses this weakness by focusing on other external financial determinants of capital market development in emerging markets. Apart from FDI and FPI, factors such as remittance, trade openness, factors income and exchange rates were also found by the empirical literature to be the main variables that were instrumental in influencing capital market performance. The current study addresses the weakness by focusing on other external financial determinants of capital market development in emerging markets. Apart from FDI and FPI, factors such as remittance, trade openness, factors income and exchange rates were also found by the empirical literature to be the main variables that were instrumental in influencing capital market performance.

Theoretical Framework and Model Specification

Theoretical Framework

Asset Pricing in an Efficient Capital Market – The Capital Asset Pricing Model

The study is anchored on Fuller (1981) of capital asset pricing model. This model tires to provide a theorem against Markowitz portfolio theory which made no statement about how assets or portfolios should be priced in an efficient market. The capital asset pricing model (CAPM) on the other hand is a single factor linear equilibrium pricing model that assists investors in determining the equilibrium rates of return of assets in an efficient capital market. The CAPM is an extension of Markowitz portfolio theory. Lintner (1965) and Mossin (1966) independently contribute to the development of the CAPM.

The CA PM is built on the insight that unsystematic (firm-specific) risk can be diversified away, and hence investors only require to be compensated for bearing systematic (market) risk. The CAPM further states that the relevant risk (systematic risk) measure for any risky asset i is its

covariance with the market portfolio ($\sigma_{i,M}$).

Thus the expected return-systematic risk relationship can be expressed as follows:

$$E(R_i) = R_f + \sigma_{i,M} \times \left(\frac{E(R_M) - R_f}{\sigma_M{}^2} \right) \quad (1)$$

By defining $\sigma_{i,M} / \sigma_M{}^2$ as the beta of asset i (β_i), Equation 1 can be restated as

$$E(R_i) = R_f + \beta_i (E(R_M) - R_f) \quad (2)$$

Equation 2, known as the security market line (SML), assists investors in determining the "conditions for equilibrium of exchange of the assets". Mossin (1966) explains, "Each individual brings to the market his present holdings of the various assets, and an exchange takes place. Therefore, to know what prices it must be to satisfy demand schedules and also fulfill the condition that supply, and demand be equal for all assets. To know this, first relations describing individual demand must be derived. Second, these relations must be incorporated in a system describing general equilibrium. According to the pricing system of the SML described by Equation 2, the expected return on any asset or portfolio i $E(R_i)$ is equal to the risk-free rate (Rf) plus the market risk premium $(E(R_M) - R_f)$ proportional to its systematic risk (β_i) when the capital market is in equilibrium. In other words, assets with higher values of beta must offer higher returns in order to compensate investors for bearing higher systematic risk.

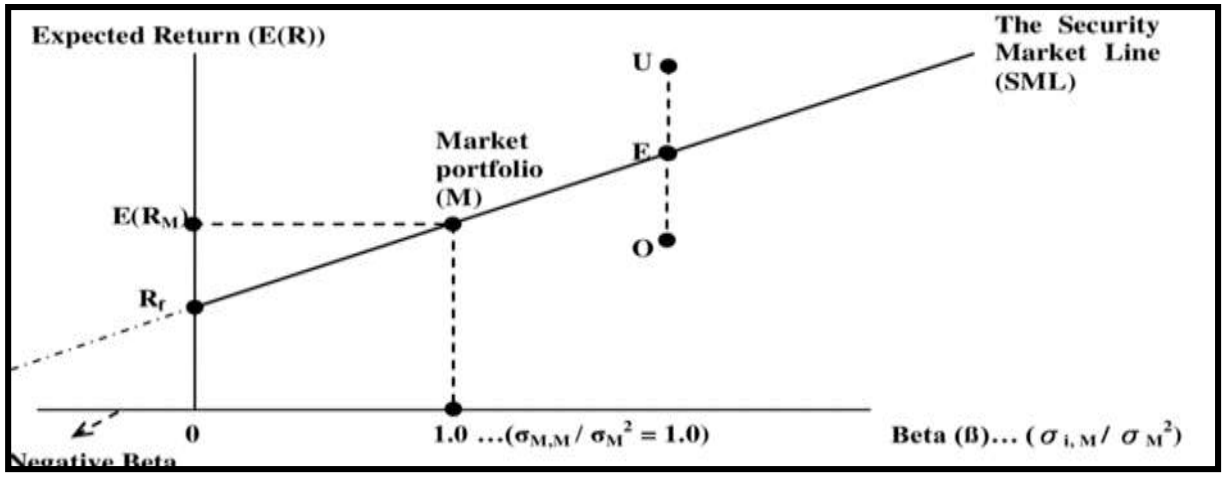

Figure 1: The Security Market Line (SML)

Figure 1 graphically depicts the systematic risk-expected return relationship described by the SM

L. When the capital market is in equilibrium, all assets must be plotted on the SML and offer returns that are justified for their respective levels of systematic risk. An asset plotted above the SML is undervalued since it offers higher returns than what is expected based on its systematic risk exposure. On the other hand, an asset is overvalued if it is plotted below the SML since it offers lower returns than what is expected for its systematic risk exposure. Consider two assets U and O that offer differential returns with the same value of beta in Figure 1.

Homogeneous investors will buy asset U and sell asset O since asset U offers higher returns than asset O with the same level of risk. The trading activities of the investors will bid up the price of asset U and reduce the price of asset O. As a result, the return of asset U decreases while the return of asset O increases. This process brings both assets U and O to the equilibrium price indicated by the SML at point E in Figure 1. Since the beta coefficient of the SML relates the covariance of any asset i with the market portfolio ($\sigma_{i,M}$) to the variance of the market portfolio (σ_M^2), the market portfolio has a beta of 1.0 as shown in Figure 1. The standardization of systematic risk using the movements in the market return as the benchmark implies that the market risk is the single relevant measure of risk in an efficient capital market.

Model Specification

Based on the above theoretical framework, the model for this study is anchored on the modern portfolio theory developed by Fama (1965, 1970 & 1991) and Markowitz (1952). It is an investment hypothesis centered on the idea that risk-averse investors can construct portfolios to optimize expected return based on a given level of market risk. Thus, the response of foreign investors in constructing a portfolio of various assets depends on the development of the capital market to guide against the vulnerability of investors' funds. Investment funds from these sectors having homogeneous expectations would arrive at the same optimal risky portfolio as explained in equations 1and 2. The fundamental objective of this study is to empirically assess the extent to which external financial flows has gone in boosting market capitalization in the Nigerian capital market. The econometric specification of this general model expressed in full-log. Thus, the equation in its empirical form is specified below:

$$\log \boldsymbol{TMC}_t = \alpha_0 + \alpha_1 \log \boldsymbol{FDI}_t + \alpha_2 \log \boldsymbol{FPI}_t + \alpha_3 \log \boldsymbol{REPT}_t + \alpha_4 \log \boldsymbol{RECE}_t + \alpha_5 \boldsymbol{TOP}_t + \alpha_6 \log \boldsymbol{ODA}_t + \mu_t \quad (3)$$

Where, TMC_t is the total annual market capitalization on the Nigerian Stock Exchange (₦'Billion) value at time t. TMC is the market value of a company's outstanding shares. Market capitalization represents the aggregate value of a company or stock. It is obtained by multiplying the total number of shares outstanding by their current price per share. TMC_t is proxy for capital market performance; they are in taken as the explained variables in our study.

FDI_t is the foreign direct investment at time t. It is an investment in the form of a controlling ownership in a business in one country by an entity based in another country. It is defined as the total types of FDI, which comprises of horizontal, platform and vertical FDI. Horizontal FDI arises when a firm duplicates its home country-based activities at the same value chain stage in a host country through FDI. Platform FDI is foreign direct investment from a source country into a destination country for the purpose of exporting to a third country. While Vertical FDI takes place when a firm through FDI moves upstream or downstream in different value chains.

FPI_t is foreign portfolio investment at time t. It defines as a grouping of assets such as stocks, bonds, and cash equivalents. foreign portfolio investment is the entry of funds into a country where foreigners deposit money in a country's bank or make purchases in the country's stock and bond markets, sometimes for speculation. $REPT_t$ and $RECE_t$ are the values of personal remittances at time t. Personal remittances are the sum of personal transfers and compensation of employees. Where $REPT_t$ is the sum remittance from personal transfers or personal transfers in form of remittance at time t. While $RECE_t$ is the remittance from compensation of employees' compensation from the rest of the world at time t. They are define as a non-commercial transfer of money by a foreign worker, a member of a diaspora community, or a citizen with familiar ties abroad, for household income in their home country or homeland. Money sent home by migrants competes with international aid as one of the largest financial inflows to developing countries.

Personal transfers represent a broader definition of worker remittances. Personal transfers include all current transfers in cash or in kind between resident and non-resident individuals, independent of the source of income of the sender (and regardless of whether the sender receives income from labor, entrepreneurial or property income, social benefits, and any other types of transfers; or disposes assets) and the relationship between the households.

Compensation of employees refers to the income of border, seasonal, and other short-term workers who are employed in an economy where they are not resident and of residents employed by non-resident entities. Compensation of employees represents remuneration in return for the labor input to the production process contributed by an individual in an employer-employee relationship with the enterprise. Compensation of employees has three main components: wages and salaries in cash, wages and salaries in kind, and employers' social contributions. TOP_t is trade openness at time t. 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. $TOP_t = (IMP_t + EXP_t / GDP_t$, where IMP is defined as Value of imports and EXP defined as Value of exports. ODA_t is defined as official development assistance.

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METHOD OF DATA ESTIMATION AND SOURCES OF DATA

Method of Data Estimation

This study was aimed at investigating the extent to which external financial flows has gone in boosting market capitalization in the Nigerian capital market as well as to construct a model using multivariate. The goal of this study is achieved in these following steps: first, this study used, Unit Root Test, the determining the Optimal Lags Length for the series**,** the Johansen Cointegration Test, the Vector Error Correction Model (VECM) and then ECT t-statistics Causality Test.

i. **Testing for Stationarity:** This study takes into consideration the problem of non-stationarity. A time series is said to be stationary if it's mean, variance and covariance remain constant with respect to time. Regression of a non-stationary time series on another non-stationary time series may produce unstable regression result. To avert the problem of spurious regression result and erroneous inference, the researcher will conduct the unit root test to determine the stationarity or otherwise of the time series data, using Augmented Dickey-Fuller (ADF) unit root test, the most widely used (Dickey and Fuller, 1979). Augmented Dickey-Fuller (ADF) test statistics for unit root is adopted in this study, because ADF has stood the test of time as robust tool that appears to give good result over a wide range of applications. This will enable us to ascertain the order of integration of each variable if stationary at levels I (0) or at first difference I (1).

ii. **Determining the Optimal Lags Length for The Series in The Model:** Choosing appropriate lag length is important in VAR or VEC modelling. This is very necessary to enable us to know the number of Lags to include in the VAR or VEC models. Because too many lags lose the degree of freedom and the coefficients will be statistically insignificant due to present of multicollinearity, while too few lags lend to specification errors. Optimal number of lags can be selected by using available lag length selection criteria. Most popular criteria are Akaike Information Criterion (AIC), Schwartz Bayesian Criterion (SBC), and Hannan Quinn criterion (HQC).

iii. **Cointegration Testing: Johansen's Procedure:** This study use Johansen Cointegration to test cointegrating relationships between several non-stationary time series data. To verify further, the relevance of the model is required, there is need to test for cointegration. That is, can we assume a long run relationship in the model even though the series are drifting apart or trending either upward or downward? If there is cointegration, we specify the long-run model and estimate VECM.

iv. **Vector Error Correction Model (VECM) and Error Correction Mechanism (ECM)**
The study use VECM to examine long and short-run dynamics of the cointegrated series. It restricts the long-run behaviour of endogenous variables to converge to their

cointegrating relationships. The cointegrating term is known as the error correction term (ECT) since the deviation from long run equilibrium is corrected gradually through a series of partial short run adjustment. VECM representation has more efficient coefficient estimates. If the variables are I(1) and there exists a cointegration relationship, then Error Correction Model (ECM) can be derived or if u_t is I(0) and variables are I(1) there exists a cointegration relationship

v. **Short Run, Long Run and Strong Causal Analysis:** We use the regressors' and ECT t-statistics approach to check for the short run, long run and strong causal effects among the variables. If regressors' and ECT t-statistics are statistically significant, the short run, long run and strong causal effects are inferred.

Dynamic Specification of Level Models

Estimated VECM with Total Annual Market Capitalization (TMC) as Target Variable
Recall equation (3.9) the multiple relationship

$$\log TMC_t = \alpha_0 + \alpha_1 \log FDI_t + \alpha_2 \log FPI_t + \alpha_3 \log REPT_t + \alpha_4 \log RECE_t + \alpha_5 TOP_t + \alpha_6 \log ODA_t + \mu_t \quad \textbf{(5)}$$

We have the corresponding VEC models of TMC written as.

$$\Delta \log TMC_t = \alpha_{0\log TMC} + \sum_{i=1}^{k} \alpha_1 \Delta \log TMC_{t\text{-}i} + \sum_{i=1}^{k} \alpha_2 \Delta \log FDI_{t\text{-}i} + \sum_{i=1}^{k} \alpha_3 \Delta \log FPI_{t\text{-}i} + \sum_{i=1}^{k} \alpha_4 \Delta \log REPT_{t\text{-}i} + \sum_{i=1}^{k} \alpha_5 \Delta \log RECE_{t\text{-}i} + \sum_{i=1}^{k} \alpha_6 \Delta TOP_{t\text{-}i} + \sum_{i=1}^{k} \alpha_7 \Delta \log ODA_{t\text{-}i} + u_{\log TMCt} \quad (6)$$

Short run Model
We will obtain the short run dynamic parameters by estimating a VECM or an ECM associated with long run estimation.

Error Correction Model for TMC Model is given as

$$\Delta \log TMC_t = \alpha_{0\log TMC} + \lambda_{\log TMC} ECT_{t-1} + \sum_{i=1}^{k} \alpha_1 \Delta \log TMC_{t\text{-}i} + \sum_{i=1}^{k} \alpha_2 \Delta \log FDI_{t\text{-}i} + \sum_{i=1}^{k} \alpha_3 \Delta \log FPI_{t\text{-}i} + \sum_{i=1}^{k} \alpha_4 \Delta \log REPT_{t\text{-}i} + \sum_{i=1}^{k} \alpha_5 \Delta \log RECE_{t\text{-}i} + \sum_{i=1}^{k} \alpha_6 \Delta TOP_{t\text{-}i} + \sum_{i=1}^{k} \alpha_7 \Delta \log ODA_{t\text{-}i} + u_{\log TMCt} \quad (7)$$

Adjustment parameter is λ determines speed of adjustments of the models, while $\alpha_1 - \alpha_7$ are the short run dynamic coefficients of the TMC model. However, the difference Δ represents only the short-run change in the time series but totally misses out the long-run information.

Long Run Model
Cointegrating Equation for TMC Model is given as:

$$\varepsilon_{t-1} = \boldsymbol{ECT}_{t-1} = \log \boldsymbol{TMC}_{t-1} - \phi_0 - \phi_1 \log \boldsymbol{FDI}_{t-i} - \phi_2 \log \boldsymbol{FPI}_{t-i} - \phi_3 \log \boldsymbol{REPT}_{t-i} - \phi_4 \log \boldsymbol{RECE}_{t-i} - \phi_5 \boldsymbol{TOP}_{t-i} - \phi_6 \log \boldsymbol{ODA}_{t-i} \quad (8)$$

ECT represents the long run operator or the long relationship in the model (the cointegrating equation and long run model in VECM). Note: ECT_{t-1} can be rewrite as ε_{t-1}. $\phi_1 - \phi_6$ are the long run coefficients of the TMC model.

Nature, Sources and Scope of Data

The study used time series secondary data. The data was generated in line with the period covered by the study which is 1981 to 2020, a period of 36 years. The choice of the methodology adopted for the study was based on the objective of the study. Data for total annual market capitalization on the Nigerian Stock Exchange, foreign direct investment, foreign portfolio investment, remittance, trade openness and official development assistance was sourced from the Central Bank of Nigeria Statistical Bulletin (CBN, 2020), Nigeria National Bureau of Statistics (NBS) (2020), World Bank Reports (World Bank, 2020) and publications of Nigerian Stock Exchange (NSE, 2020).

ANALYSIS AND DISCUSSION OF RESULTS

i) Unit Root Test

In this study, to determine the order of integration, we test for the presence of unit root, using the Augmented Dickey-Fuller (ADF) test statistic, and the summary of the results of the tests are presented in Table 1.

Table 1: Summary of Results of ADF Unit Root Tests at First Difference

Series	ADF t-Stat at 1st Diff.	Critical value		Prob.	AIC, Maxlag	Order of Integration	Randomness
D(LOGTMC)	-5.403262	1% level	-4.252879	0.0005	**1**	**I(1)**	**Constant**
		5% level	-3.548490				
		10% level	-3.207094				
D(LOGFDI)	-5.666173	1% level	-4.211868	0.0002	**1**	**I(1)**	**Constant**
		5% level	-3.529758				

		10% level	-3.196411				
D(LOGFPI)	-6.019295	1% level	-4.211868	0.0001	**1**	**I(1)**	**Constant**
		5% level	-3.529758				
		10% level	-3.196411				
D(LOGREPT)	-6.696055	1% level	-4.211868	0.0000	**1**	**I(1)**	**Constant**
		5% level	-3.529758				
		10% level	-3.196411				
D(LOGRECE)	-6.878784	1% level	-4.211868	0.0000	**1**	**I(1)**	**Constant**
		5% level	-3.529758				
		10% level	-3.196411				
D(TOP)	-8.420136	1% level	-4.211868	0.0000	**1**	**I(1)**	**Constant**
		5% level	-3.529758				
		10% level	-3.196411				
D(LOGODA)	-5.705578	1% level	-4.219126	0.0002	**1**	**I(1)**	**Constant**
		5% level	-3.533083				
		10% level	-3.198312				

The optimum lags length for the ADF determined by Schwarz Information Criterion (SIC).
Source: Authors' Computation

From the ADF test statistics, comparing the variables *p* values levels with the first difference ADF unit root test statistic and various probabilities, the results show all the included variables were integrated at order one, that is I(1) or they were stationary at first difference. eight variables were statistically significant at 1%, 5% and 10% critical values in first difference. From the results in the above tables' summary, there is 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. We therefore concluded that the series are of order one I(1). These are MacKinnon critical values for the rejection of hypothesis of a unit root. All the series were integrated at first difference, they are integrated of the same order, I(1). The implication of this is to test for cointegration.

ii) Determining the Optimal Lags Length for The Series in The Model

Table 2: Summary of the Results of the Optimal Lag Length

Endogenous variables: LOGTMC						
Lag	LogL	LR	FPE	AIC	SC	HQ
1	-2.102395	115.6892	0.074540	0.162157*	0.331103*	0.271937
Endogenous variables: LOGFDI						
Lag	LogL	LR	FPE	AIC	SC	HQ
1	-23.36518	136.6843*	0.222513*	1.335010*	1.421198*	1.365675*
Endogenous variables: LOGFPI						
Lag	LogL	LR	FPE	AIC	SC	HQ
1	-44.98599	43.40048*	0.694313*	2.472947*	2.559135*	2.503612*
Endogenous variables: LOGREPT						
Lag	LogL	LR	FPE	AIC	SC	HQ
1	-43.81302	130.2708*	0.652745*	2.411212*	2.497400*	2.441877*
Endogenous variables: LOGRECE						
1	-60.15201	60.24775*	1.542460*	3.271159*	3.357347*	3.301824*
Endogenous variables: TOP						
Lag	LogL	LR	FPE	AIC	SC	HQ
1	-133.1449	26.06235*	71.88801*	7.112889*	7.199078*	7.143554*
Endogenous variables: LOGODA						
Lag	LogL	LR	FPE	AIC	SC	HQ
1	-36.01379	115.5897	0.432984	1.945035*	2.086914*	2.031391
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

Source: Authors' Computation

The criterion that gives the lowest value is the best. The Table 2 shows that the optimal lags length for all the series in the model is 1 and the selected criteria is Akaike Information Criterion (AIC). It is the criterion that gives the lowest values.

iii) Johansen Cointegration Test

In this study, we carry a co-integration test for the variables in the models using Johansen cointegration test for a single-equation test. The result of co-integration for the variables is shown in Table 2 below. The result shows that there exists one co-integrating equation at 1%, and 5% level of significance. This result indicates that there is a long-run relationship between the dependent and all the independent variables used in both models.

Table 3: Summary of Cointegration Test Level Result for Model 1

Date: 22/09/22 Time: 09:21							
Sample (adjusted): 1983 2021							
Included observations: 39 after adjustments							
Trend assumption: Linear deterministic trend							
Series: LOGTMC LOGFDI LOGFPI LOGREPT LOGRECE TOP LOGODA							
Lags interval (in first differences): 1 to 1							
Unrestricted Cointegration Rank Test (Trace)							
Hypothesized		Trace	0.05				
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	Remark		
None *	0.889353	207.2439	125.6154	0.0000	We reject H_0 at 5%		
At most 1 *	0.722410	121.3891	95.75366	0.0003	We reject H_0 at 5%		
At most 2 *	0.609731	71.40636	69.81889	0.0372	We reject H_0 at 5%		
At most 3	0.323411	34.71055	47.85613	0.4634	We cannot reject H_0 at 5%		
At most 4	0.269329	19.47358	29.79707	0.4593	We cannot reject H_0 at 5%		
At most 5	0.167860	7.235687	15.49471	0.5504	We cannot reject H_0 at 5%		
At most 6	0.001774	0.069242	3.841466	0.7924	We cannot reject H_0 at 5%		
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level							
* denotes rejection of the hypothesis at the 0.05 level							
**MacKinnon-Haug-Michelis (1999) p-values							
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)							
Hypothesized		Max-Eigen	0.05				
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	Remark		
None *	0.889353	85.85484	46.23142	0.0000	We reject H_0 at 5%		
At most 1 *	0.722410	49.98274	40.07757	0.0028	We reject H_0 at 5%		

At most 2 *	0.609731	36.69581	33.87687	0.0224	We reject H_0 at 5%		
At most 3	0.323411	15.23697	27.58434	0.7293	We fail to reject H_0 at 5%		
At most 4	0.269329	12.23790	21.13162	0.5244	We fail to reject H_0 at 5%		
At most 5	0.167860	7.166445	14.26460	0.4696	We fail to reject H_0 at 5%		
At most 6	0.001774	0.069242	3.841466	0.7924	We fail to reject H_0 at 5%		
Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level							
* denotes rejection of the hypothesis at the 0.05 level							
**MacKinnon-Haug-Michelis (1999) p-values							
1 Cointegrating Equation(s):			Log likelihood			-242.0598	
Normalized cointegrating coefficients (standard error in parentheses)							
LOGTMC	LOGFDI	LOGFPI	LOGREPT	LOGRECE	TOP	LOGODA	
1.000000	-0.264032	-0.109118	-0.152880	-0.166391	-0.017423	-0.294295	
	(0.04350)	(0.02954)	(0.03181)	(0.03081)	(0.00440)	(0.03483)	

Source: Authors' Computation

The result displayed two statistics, Trace Statistic and Max-Eigen Statistic. The values of the Trace Statistic and Critical Value or the values of the Max-Eigen Statistic and Critical Value are compared. The result showed 7 hypothesised number of cointegrating equation (CE). The 7 variables are LOGTMC LOGFDI LOGFPI LOGREPT LOGRECE TOP and LOGODA formed the null hypothesis equations. Using the Trace Statistic, the series displayed seven cointegrating vector, as suggested by the Trace and Johansen test for cointegration, when tested with constant and without a trend. Looking at the "None" with the asterisk sign (*), it gives the likelihood of rejection. For example, the Trace Statistics (207.2439) > 5% CV (125.6154) and the probability value is < 0.05 in Table 3. And given the results generated, we reject the null hypothesis (H0) that says there is "no cointegrating equation in the model. That is, no cointegration at 5% level is rejected. And accept H1, that implies that the variables are cointegrated.

Normalized cointegrating coefficients (standard error in parentheses)
In the Normalized cointegrating coefficients (standard error in parentheses, in the long run the signs of the coefficients are revised in the long run. Theoretically, the result showed that are consistence with the model a priori expectation, that all the independents' variables we have positive impacts on LOGTMC in the longrun.

iv) The Vector Error Correction Model (VECM) Analysis

Estimating an ECM-VECM with TMC as Target Variable. The cointegration test indicates only 3 cointegrating equations at the 0.05 level, we specification an ECM for the target variable LOGTMC. Table 4 summary the result output of the VECM model.

Table 4: VEC Estimation Output for LOGTMC Model

Vector Error Correction Estimates							
Date: 22/09/22 Time: 14:10							
Sample (adjusted): 1983 2021							
	Included observations: 39 after adjustments						
	Standard errors in ( ) & t-statistics in [ ]						
	First Part: Cointegrating Equation (Long-run Model)						
Cointegrating Eq:	CointEq1						
LOGTMC(-1)	1.000000						
LOGFDI(-1)	-0.264032						
	(0.04350)						
	[-6.07031]						
LOGFPI(-1)	-0.109118						
	(0.02954)						
	[-3.69425]						
LOGREPT(-1)	-0.152880						
	(0.03181)						
	[-4.80626]						
LOGRECE(-1)	-0.166391						
	(0.03081)						
	[-5.40131]						
TOP(-1)	-0.017423						
	(0.00440)						
	[-3.95583]						
LOGODA(-1)	-0.294295						
	(0.03483)						

	[-8.45013]						
C	6.602883						
	Second Part: Short Run Model						
Error Correction:	D(LOGTMC)	D(LOGFDI)	D(LOGFPI)	D(LOGREPT)	D(LOGRECE)	D(TOP)	D(LOGODA)
CointEq1	-0.499363	-0.059317	-0.840941	-0.636355	0.834085	-8.248790	0.403460
	(0.08525)	(0.22612)	(0.40209)	(0.39404)	(0.52915)	(3.80053)	(0.31525)
	[-5.85738]	[-0.26233]	[-2.09141]	[-1.61495]	[1.57629]	[-2.17043]	[1.27983]
D(LOGTMC(-1))	0.221071	0.321037	-0.627202	0.020639	-0.074830	6.098764	-0.360306
	(0.12459)	(0.33043)	(0.58760)	(0.57583)	(0.77326)	(5.55389)	(0.46068)
	[1.77446]	[0.97156]	[-1.06740]	[0.03584]	[-0.09677]	[1.09811]	[-0.78211]
D(LOGFDI(-1))	-0.022365	0.152580	-0.047310	0.005328	-0.350387	-8.686475	0.209075
	(0.13059)	(0.34636)	(0.61592)	(0.60358)	(0.81053)	(5.82158)	(0.48289)
	[-0.17126]	[0.44052]	[-0.07681]	[0.00883]	[-0.43229]	[-1.49212]	[0.43297]
D(LOGFPI(-1))	-0.003621	0.057540	-0.134479	0.037268	-0.544138	-1.084470	0.054683
	(0.06788)	(0.18004)	(0.32017)	(0.31375)	(0.42133)	(3.02616)	(0.25101)
	[-0.05335]	[0.31959]	[-0.42003]	[0.11878]	[-1.29148]	[-0.35836]	[0.21785]

D(LOGREPT(-1))	-0.211207	-0.008474	-0.377521	-0.386641	0.126890	-4.086452	0.003792
	(0.05294)	(0.14042)	(0.24969)	(0.24469)	(0.32859)	(2.36008)	(0.19576)
	[-3.98945]	[-0.06035]	[-1.51193]	[-1.58010]	[0.38616]	[-1.73149]	[0.01937]
D(LOGRECE(-1))	0.024168	0.088389	-0.014925	0.067121	-0.155134	0.582093	0.089684
	(0.02755)	(0.07307)	(0.12994)	(0.12733)	(0.17099)	(1.22815)	(0.10187)
	[0.87725]	[1.20965]	[-0.11487]	[0.52712]	[-0.90725]	[0.47396]	[0.88036]
D(TOP(-1))	-0.009288	-0.004589	-0.000105	-0.010665	-0.021754	-0.451620	0.007367
	(0.00383)	(0.01016)	(0.01807)	(0.01771)	(0.02378)	(0.17077)	(0.01417)
	[-2.42451]	[-0.45170]	[-0.00584]	[-0.60234]	[-0.91495]	[-2.64456]	[0.52009]
D(LOGODA(-1))	0.069162	-0.059594	-0.380726	0.012317	-0.200737	1.497433	0.221821
	(0.06272)	(0.16636)	(0.29583)	(0.28990)	(0.38930)	(2.79612)	(0.23193)
	[1.10266]	[-0.35823]	[-1.28699]	[0.04249]	[-0.51563]	[0.53554]	[0.95641]
C	0.237809	0.123975	0.480215	0.459121	0.304781	1.971983	0.241818
	(0.05815)	(0.15423)	(0.27426)	(0.26877)	(0.36092)	(2.59225)	(0.21502)
	[4.08962]	[0.80384]	[1.75096]	[1.70826]	[0.84446]	[0.76072]	[1.12462]
R-squared	0.653250	0.087089	0.160547	0.114048	0.295356	0.336593	0.147168

Adj. R-squared	0.560784	-0.156354	-0.063308	-0.122206	0.107451	0.159685	-0.080254
Akaike AIC	-0.368369	1.582469	2.733737	2.693274	3.282895	7.226160	2.247071
Schwarz SC	0.015530	1.966368	3.117636	3.077173	3.666794	7.610059	2.630970
Number of coefficients		70					

Source: Authors' Computation

v) Short Run, Long and Strong Causal Linkage Between the External Financial Flows and the Total Market Capitilization.

Regressors' and ECT t-statistics Approach

The study use regressors' and ECT t-statistics of the VECM Causality to check for the regressors' and ECT t-statistics approach to check for the short run, long run and strong causal effects among the variables. If regressors' and ECT t-statistics are statistically significant, the short run, long run and strong causal effects are inferred.

The probability values are extracted to know how significant the regressors are in explained the outcome variable. It is probability values that give significant relevance to the t statistic. If regressors' and ECT t-statistics are statistically significant, the short run, long run and strong causal effects are inferred. In this interpretation, the study use 5% level of significance to either reject or accept the hypothesis, the independents variables in our TMC model are not statistically significant in determining the long run growth of the TMC in the Nigerian capital market.

D(LOGTMC) Estimated Equations: Substituted Coefficients

D(LOGTMC) = - 0.499ECT(-1) - 0.264LOGFDI(-1) - 0.109LOGFPI(-1) - 0.153LOGREPT(-1) - 0.166LOGRECE(-1) - 0.017TOP(-1) - 0.294LOGODA(-1) + 6.603) + 0.221D(LOGTMC(-1)) - 0.022D(LOGFDI(-1)) - 0.004D(LOGFPI(-1)) - 0.211D(LOGREPT(-1)) + 0.024D(LOGRECE(-1)) - 0.009D(TOP(-1)) + 0.069D(LOGODA(-1)) + 0.238 (9)

Note: the variables without the difference ('Ds') signs explain the long run effects, while the variable with the difference ('Ds') signs explain the short run effects.

Long Run, Short Run and Strong Causal Relationship

From Table 5 and Eq(9) in LOGTMC equation, C(1) is adjustment coefficient (λ)of ECT and it is negative (-0.499) and its t-statistic is statistically significant (-5.857378), with a probability value of 0.0000 less than 1% or 5%. This shows there is convergence and long run causal relationship in the TMC model. Also, in the LOGTMC equation D(LOGREPT(-1)) and D(TOP(-1)) probability values 0.0001 and 0.0162 respectively are less than 5% level of significant. We

can say that only these two variables, REPT and TOP have causal effects on TMC in the short run and also in long run (see the VECM analysis Table 4).

The fact that results the t-statistics of the D(LOGREPT) and D(TOP) in the short run are statistically significant and the t-statistics of the ECT is also statistically significant in the long run in the TMC model, these joint statistically significance between the variables in the short and long run implies a strong causal relationship in between the variables.

4.3.2 Interpretation and Discussion of Results of LOGTMC Model

The VEC estimation output consists of two parts. **The first part** reports the results from the first step Johansen procedure. If you did not impose restrictions, EViews will use a default normalization that identifies all cointegrating relations. Asymptotic standard errors (corrected for degrees of freedom) are reported for parameters that are identified under the restrictions.

The second part of the output reports results from the second step VAR in first differences, including the error correction terms estimated from the first step. In EViews, the error correction terms are denoted CointEq1, CointEq2, and so on in the output. This part of the output has the same format as the output from unrestricted VARs as explained in "Estimation Output", with two differences.

Analysis and interpretation of Short-run Result

ECM Model for TMC given as:

$$\Delta \log TMC_t = \alpha_{0\log TMC} + \lambda_{\log TMC} ECT_{t-1} + \sum_{i=1}^{k} \alpha_1 \Delta \log TMC_{\text{t-i}} + \sum_{i=1}^{k} \alpha_2 \Delta \log FDI_{\text{t-i}} + \sum_{i=1}^{k} \alpha_3 \Delta \log FPI_{\text{t-i}} + \sum_{i=1}^{k} \alpha_4 \Delta \log REPT_{\text{t-i}} + \sum_{i=1}^{k} \alpha_5 \Delta \log RECE_{\text{t-i}} + \sum_{i=1}^{k} \alpha_6 \Delta TOP_{\text{t-i}} + \sum_{i=1}^{k} \alpha_7 \Delta \log ODA_{\text{t-i}} + u_{\log TMCt} \quad (10)$$

The result in Eq.(9) shows that 1% change in the lag of TMC is associated with 0.221% increase in the current TMC, on average ceteris paribus in the short run, while 1% change in the lags of FDI, FPI, REPT and TOP are associated with a 0.0224%, 0.004% , 0.211% and 0.009% decreases respectively in TMC on average ceteris paribus in the short run. Also, 1% change in the lags of RECE and ODA are associated with 0.024% and 0.069% increases respectively in TMC on average ceteris paribus in the short run.

The ECT result shows that the previous periods deviation from long run equilibrium is corrected into current period at an adjustment speed of 49.94%. Or the coefficient of -0.4994, suggests 49.94% movement back towards equilibrium following a shock to the model, one period later. The error correction term has a t-statistic of -5.85738, which is highly significant supporting the cointegration result. The coefficient on the error correction term is negative, so the model is stable.

Probability Values and DW statistic of the TMC-VECM Output

To see each equation, the probability values and Durbin-Watson statistic of the VECM model, estimate the VECM model using the Ordinary Least Squares Method (OLS) method.

Table 5: VECM Ordinary Least Squares Method for LOGTMC Model

Estimation Method: Least Squares				
Date: 22/09/22 Time: 17:16				
Sample: 1983 2021				
Included observations: 39				
	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.499363	0.085254	-5.857378	0.0000
C(2)	0.221071	0.124585	1.774460	0.0774
C(3)	-0.022365	0.130590	-0.171264	0.8642
C(4)	-0.003621	0.067883	-0.053348	0.9575
C(5)	-0.211207	0.052941	-3.989453	0.0001
C(6)	0.024168	0.027550	0.877254	0.3814
C(7)	-0.009288	0.003831	-2.424514	0.0162
C(8)	0.069162	0.062723	1.102664	0.2714
C(9)	0.237809	0.058150	4.089618	0.0001
Determinant residual covariance		0.000580		
Equation: D(LOGTMC) = C(1)*(LOGTMC(-1) - 0.264032*LOGFDI(-1) - 0.109117*LOGFPI(-1) - 0.15288039924*LOGREPT(-1) - 0.166390889377*LOGRECE(-1) – 0.0174225002274*TOP(-1) - 0.294294956512*LOGODA(-1) + 6.60288264366) + C(2)*D(LOGTMC(-1)) + C(3)*D(LOGFDI(-1)) + C(4)*D(LOGFPI(-1)) + C(5)*D(LOGREPT(-1)) + C(6) *D(LOGRECE(-1)) + C(7)*D(TOP(-1)) + C(8)*D(LOGODA(-1)) + C(9)				
R-squared	0.653250	Mean dependent var		0.231725
Adjusted R-squared	0.560784	S.D. dependent var		0.274905
S.E. of regression	0.182189	Sum squared resid		0.995786
Durbin-Watson stat	2.053811			

Source: Authors' Computation

Using the probability values of the variables, we use 5% level of significance to either reject or accept the hypothesis. From Table 5, the adjustment coefficient (λ) for the target variable (LOGTMC) equation is C(1) = -0.4994 with a probability value of 0.0000. The target variable equation is significant at 0.000(1%) level. The short run results show that the explanatory variables have little or no effects or impact on total annual market capitalization of the Nigerian Stock Exchange in the short run. VECM pays more attention to the long run effects than the short run

effects. We will further use this VECM OLS results for LOGTMC Model to check for causal effects

Analysis and interpretation of Long-run Results

Long-run Cointegrating Equation for TMC Model is given in Eq.(8). Estimated Cointegrating Equation for TMC Model is given in Table 4 as:

Estimated Cointegrating Equation for TMC Model is given in Table 4. as

$$ECT_{t-1} = 1.000\log TMC_{t-1} - 0.264\log FDI_{t-1} - 0.109\log FPI_{t-1} - 0.153\log REPT_{t-1} - 0.166\log RECE_{t-1} - 0.017TOP_{t-1} - 0.294\log ODA_{t-1} + 6.603 \quad (11)$$

This is cointegrating or Johansen long run cointegrating equation (long run model). 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. In this simple model, the only left-hand side variable is the error correction term. In long run equilibrium, this term is zero. Hence,

$$LOGTMC_t = -6.603 + 0.264\log FDI_{t-1} + 0.109\log FPI_{t-1} + 0.153\log REPT_{t-1} + 0.166\log RECE_{t-1} + 0.017TOP_{t-1} + 0.294\log ODA_{t-1} \quad (12)$$

Here all the signs have been '**reversed'.** Now we need to check whether the long run coefficient sign (negative or positive) matches with the reality or not. Variables here are all long run variables.

Using the **Normalized Cointegrating Coefficients** in the Johansen cointegration test result in Table 3) of Model, we have the same equation as

$$LOGTMC = -6.603 + 0.264\log FDI + 0.109\log FPI + 0.153\log REPT + 0.166\log RECE + 0.017TOP + 0.294\log ODA \quad (13)$$

Normalized cointegrating coefficients (standard error in parentheses)

In the Normalized cointegrating coefficients (standard error in parentheses, in the long run the signs of the coefficients are revised in the long run. Theoretically, the result showed that are consistence with the model a priori expectation.

The result shows that FDI, FPI, REPT, RECE, TOP and ODA have positive impacts on TMC in the long run. 1% change in the FDI, FPI, REPT, RECE, TOP and ODA will associate with 0.26%, 0.11%, 0.15%, 0.17% 0.02% and 0.29% increase in the TMC respectively, on average ceteris paribus in the long run. These results are in line with our apriori expectations of the long run effects of extent external financial flows on market capitalization in the Nigerian capital market.

Policy Recommendations and Implication

In this section, the policy recommendation of the study is highlighted based on the findings of the study. Since the findings showed that foreign direct investment, foreign portfolio investment, remittance from personal transfers, remittance from compensation of employees, trade openness and official development assistance are significant components of external financial flows will cause an improvement in the level of market capitalization in the capital market Nigeria in the long run and partially in the short run. It is however imperative that the policy recommendations are directed at improving external financial inflows effects in short and long run welfares in Nigeria. In lieu of the foregoing, the following recommendations were suggested.

i. Finding from the objective showed that all the external financial flows used in this study tend to generate unpredictable and atypical influences on long term capital market development in Nigeria, giving little room for short run development of the market. The study thereby suggested that the policy measures aimed at directing long run capital inflows should be different with those aimed at changing the short run patterns of flow.

ii. Since FDI inflows have significant positive impact on market capitalization the study therefore recommends that, government and policy makers should institute and implement policies to attract more FDI inflows and also safeguard returns on investment of foreign investors for the growth of the stock and financial market in Nigeria for the prospect of the economy at large. Also, there should be strict monetary policies implementation to ensure macroeconomic stability. This is to ensure the stability of local currency and the control of inflation to enhance smooth running of the Nigeria Stock Exchange (NSE) for growth of the Economy.

iii. The study revealed that, foreign portfolio investment exerts a positive significant effect on market capitalization in Nigeria, the study recommended that capital market regulators should apply all necessary tools and continue to encourage listing of private companies on the floor of stock exchange market. Also, to boost the value of transactions in the Nigerian capital market, there is need for the availability of more investment instruments such as derivatives, convertibles, future, swaps and options as we have in the developed countries.

iv. The study therefore makes the following recommendations in view of the above findings on diaspora remittances. First, the Nigerian government thorough the ministry of foreign affairs and other government agencies need to reconsider the Nigeria foreign investment policy and the effectiveness of each foreign inflow with the sole objective being to attract productive foreign financial inflows such as diaspora remittances. The foreign investment policy should only target those inflows that have a productive effect on the stock market and other sectors of the economy. More emphasis should be placed on foreign inflows such

as diaspora remittances that have a high significant positive effect on stock market development.

Secondly, the government needs to devise measures that would boost investor confidence and thus attract increased diaspora remittances. The government should institute aggressive campaigns targeting the Nigerians living in the diaspora to educate them on the importance of investing back at home. The Nigeria government should create a department of economic relations to be located at all Nigerian foreign embassies abroad. The department will be charged with the role of sensitizing the Nigerians in the diaspora on the available investment opportunities at the NSE.

Thirdly, lowering the transaction costs of remittances to Nigeria may help increase the flow of remittances through official channels and this may increase their contribution to financial development. It is also important to bring remittance recipients into the formal financial sector and channel their savings into productive uses that can generate long-term benefits. This could be achieved by adopting credit facility programs by financial institutions.

Fourthly, the national assembly therefore needs to provide a conducive environment for diaspora investors through formulation of favourable investment policies, ensuring political stability, minimizing bureaucracy and managing corruption.

v. The empirical result also showed that official development assistance in form of aid has a significant positive impact on the level of market capitalization in the short and long run. On the other hand, volatility of official development assistance by creating uncertainty in the flow of aid has a negative influence on domestic capital formation activity. Foreign aid is effective in enhancing growth. This paper therefore recommends that Nigeria should grossly avoid accepting aid from developed nations as it depreciates the economy and expose the country's economy to external control, manipulation and imposition of unpalatable economic policies that cannot augur well with internal revenue generation and economic sustainability. Furthermore, to optimize foreign aid, monetary policy fiscal policy needs to be more credible from the perspective of foreign countries.

vi. Lastly, trade openness has showed the same positive influence on financial development just like other variable. Trade openness is seen to have a simultaneously stimulating effect with foreign capital inflows, thus improving economic development. The study suggests encouragement of trade openness that will in turn stimulate financial development

CONCLUSION

This study examined the extent to which external financial flows will influence capital market performance in Nigeria proxy as total market capitalization, over the period 1981-2020 using annual time series. In this study external financial flows variables include foreign direct investment, foreign portfolio investment, remittance from personal transfers, remittance from compensation of employees, trade openness and official development assistance. To empirically analyze the objective, the study employed the vector error correction model (VECM), the error correction model (ECM) and the ECT causality approaches to establish the long-run and short-run relationship between the dependent and the independent variables.

The findings from this study tend to confirm to the a priori expectations on the impacts of external financial flows on capital market performance. Categorically, the result reveals that in the short run only these explanatory variables, the past level of total annual market capitalization, compensation of employees and official development assistance have positive impacts on total annual market capitalization model, the highest contributions seem to be from the past values of the dependent variables.

The long run VECM result show that all the independent variables in the total annual market capitalization have positive impacts on the model in the long run. The result shows that foreign direct investment, foreign portfolio investment, remittance from personal transfers, remittance from compensation of employees, trade openness and official development assistance. have positive impacts on total annual market capitalization in the long run. The estimated impacts show that 1% change in these variables will associate with 0.26%, 0.11%, 0.15%, 0.17% 0.02% and 0.29% increase in the total annual market capitalization respectively, on average ceteris paribus in the long run.

For instance, the study found strong evidence of a positive and significant link between capital market performance and diaspora remittances, irrespective of the different control variables and estimation techniques used. Since diaspora remittances had a significant positive effect on market capitalization, the study concludes that an increase in diaspora remittances will result in enhanced market value, liquidity and price stability. In other words, increase in diaspora remittance (RECE & REPT) will significantly improve the performance of stock market, because remittances influence certain aspects of financial development such as money supply. Also, Official development assistance (ODA) has played an essential role in development financing, especially for those countries with less access to private capital flows external capital for development like Nigeria.

Thus, the study has shown that the behaviour of the external financial flows are strong variables influencing the market capitalization in the capital market in Nigeria, especially the in the long run. The stock indices movement is respective to the change in external financial flows basic.

Future Research

Learning about capital markets is a complex undertaking, as there are many different functions and products within capital markets. But this work covered has been useful in providing insights into the relationship between external financial flows and capital market performance in Nigeria. However, the study could have intended to extend this analysis by using pooling time-series or panel data pooled and cross-section effects from at 10 developing countries in West Africa for a certain period. The other limitation is that, the study only focused on empirical economic variables. It is also possible to include demographic variables bureaucratic management, and environmental aspects, it is likely to produce more comprehensive findings by analyzing factors and variables associated with a country's economic growth.

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