



Financial Market Instruments and Economic Growth in Nigeria (1999-2019)

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Abstract

The research looked at the relationship between proxies and financial market instruments and economic growth in Nigeria from 1999 to 2019. The research used secondary data from the Central Bank of Nigeria bulletin over a 30-year cycle in a quantitative and ex-post-facto analysis style (1999-2019). The data was evaluated using the ordinary least square estimator, regression analysis, and the unit root test. The research was carried out with the aid of the E-view statistics package. According to the results, Treasury bills have a statistically significant impact on GDP ($p < 0.000$), government bonds are irrelevant ($p > 0.5952$), interest rates are statistically insignificant ($p > 0.1089$), and market capitalization is statistically significant ($p > 0.005$). The report concluded that financial market success has a substantial impact on Nigeria's economic development for the year under consideration as a result of the results. The study concluded that policymakers could ensure an increase in market capitalization by promoting foreign direct investment involvement in the market, among other items.

Keywords: Market capitalization, government bond, interest rate, GDP, economic growth

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1. Introduction

In a cutting-edge economy, a financial market is discernable from a financial institution based on their different roles; be that as it may, they are integral when they are relating to development because both fill in as props for economic sustenance (Onwe, 2013). Sensibly, the financial market creates wealth from which investment funds accumulate and structure revenue hotspots for different sectors (CBN, 2017). Businesses, people, and governments regularly need to raise capital to address their issues. Then again, a few people and firms have earnings that are more noteworthy than their present uses, so they have funds accessible to put resources into the market. People and associations with excess funds are saving today to collect funds for future purpose (Hassan, Babafemi & Jakade, 2016).

Financial markets have encountered numerous progressions during the most recent twenty years (Maduka & Onwuka, 2013). Technological advances in computers and telecommunications, alongside the globalization of banking and trade, which has expanded rivalry all through the world. The market is undeniably more unpredictable than few years prior and they have likewise made issues for strategy creators (Anigbogu & Nduka, 2014). The current realities existing in the greater part of the exchanges in Africa today leave some critical lacuna in the discussion on the effect of financial market development on economic growth.

On account of Nigeria, the market pointers have declined quickly because of the worldwide downturn that influenced the financial framework (Amadeo, 2013). The activities of investors participating in capital flight and benefit taking on the securities exchange could affect the economy over time with the instability of the market. Fluctuation in the market capitalization, unstable development of market pointers like the worth of exchanged offer, low all share index, high-interest rate, low support of treasury bills and treasury declaration combined with other critical variables that have added to the business cycle contraction witnessed in 2016 close by frail market returns (Adebisi & Arikpo, 2017).



It is against this bedrock that this study is embarked upon to investigate the effect of the financial market on the Economic growth of Nigeria from 1990-2019. The study aims to look at the impact of treasury bills on Nigeria's gross domestic product. In addition, the research aims to determine the effect of government bonds on Nigeria's GDP. Furthermore, the report aims to assess the relationship between interest rates and Nigeria's GDP. Moreso, the study aims to investigate the impact of market capitalization on Nigeria's GDP.

The financial market in any economy of the world assumes a significant part as a driver of sustainable development. The market offers etymological that types of assistance to the necessities of the economy works with the preparation of excess asset from the excess to the deficiency sector of the economy and from the domestic and unfamiliar sources and ideally allows such assembled assets to the shortage sector of the economy for the productive venture. The current resilience of the stock market has been boosted by light capital flows between country borders. The securities exchange is an important aspect of the capital system that causes speculation. The financial exchange improves financial backers' speculation chances by opening doors to the offer of protections when a need for cash/liquidity arises, and it allows investors to switch their capital portfolio decisions (Nwosa, 2015).

Nzotta and Okereke (2009) experimentally examined the effect of the Nigerian capital market on her financial advancement from 1981 to 2008. Utilizing the ordinary least square it was tracked down that the capital market lists have not to effect essentially on the GDP. To position the economy for expansion, the investigation indicates that the government be encouraged to put in place steps to increase investors' confidence and activities in the market, allowing it to contribute significantly to the Nigerian financial turn of events.

Capital Asset Pricing Model (CAPM) is a model for evaluating volatile securities that portray the relationship between risk and anticipated return. An asset's or a portfolio's usual return exceeds the rate on a risk-free security plus a risk premium, according to CAPM. The speculation should not be pursued if the anticipated return would not equal or surpass our required return. The following formula is often used to depict the CAPM relationship: required or anticipated return = RF Rate + (Market Return – RF Rate) Beta.

The Loanable funds theory was formed by the Swedish financial expert Knut Wicksell during the 1900s. As per him, the degree of interest rates is controlled by the organic market of loanable funds accessible in an economy's credit market. The term loanable funds allude to the amounts of money offered for loaning and requested by customers or investors during a given period. The interest rate in the model is controlled by the communication between likely borrowers and possible savers. This hypothesis proposes that speculation and reserve funds in the economy decide the degree of long-haul interest rates. Momentary interest rates, nonetheless, are controlled by an economy's financial and money related conditions.

In Nigeria, Adebisi & Arikpo (2017) looked into the relationship between financial market execution and unfamiliar portfolio interest. The data used in the audit came from the CBN's observable announcements from 1984 to 2015. The exploratory methodology was paired with an ex-post facto research schedule, and data was collected using a task area description. The Autoregressive Distributive Lag (ARDL) process was used to analyze the results. According to the conclusions of the inquiries, there is no long-term causal relationship between financial market execution and unfamiliar portfolio concern in Nigeria.

Additionally, Hassan, Babafemi & Jakade (2016) analyzed the effect of financial market advancement on economic growth in Nigeria utilizing yearly time arrangement information covering the time of 1981-2014. The examination utilized the Vector Error Correction Model (VECM) as the econometric system. The experimental outcomes show that generally speaking there is a constructive outcome of financial market advancement on economic growth in Nigeria. Nearly, every one of the financial markets, to be specific, stock, capital and money market have been found to have a huge positive contact except for just unfamiliar trade market contrarily affecting economic growth. Based on the discoveries of the investigation, it was suggested that there is a requirement for an extensive financial change to redesign the whole Nigerian financial framework to support business and venture exercises in the country.

2. Materials and Methods

To accomplish the point of the investigation, both quantitative and ex-post facto research design was adopted. The population in this investigation is the Nigerian financial market. The samples of this examination are the money market and capital market. The data utilized for this research are annual time series from 1999 to 2019 for convenience reason. They are sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin (2019). Factors, for example, Treasury bills, treasury certificates, government bonds and equities are accumulated from the Central Bank of Nigeria Statistical Bulletin. The study made use of computer software 'E-views' version 9.0 to analyse the data. The research relied on Ordinary Least Square Estimator (OLS) and various regression techniques in evaluating the correlation between the selected variables. Unit root test and Regression were analysed in the study.

Model Specification

The impact of financial market results on Nigerian economic development is investigated in this report (1990-2019). The time-series data covered a 30-year cycle from 1990 to 2019 and was based on secondary data from the Central Bank of Nigeria (CBN) statistical bulletin (2019).

This model employed some variables identified from previous studies

$$GDP = f(TB, GB, INT, MCAP) \dots\dots\dots(1)$$

An Econometric Function

$$RGDP = \beta_0 + \beta_1 TB + \beta_2 GB + \beta_3 INT + \beta_4 MCAP + \mu \dots\dots\dots Eqn (2)$$

Where;

RGDP= Real Gross Domestic Product

TB = Treasury Bills

GB = Government Bonds

INT= Interest rate

MCAP= Market Capitalization

β_0 =Constant term

$\beta_1 - \beta_4$ =Coefficients of explanatory variables .

μ =Error term

3. Results

This section of the paper presented the descriptive and inferential results in turn

Table 1: Unit Root Test at First Differenced

Group unit root test: Summary

Series: GDP, TB, GB, INT, MCAP

Date: 02/24/19 Time: 23:18

Sample: 1990 2019

Individual consequences of exogenous factors

Total lags are automatically selected.

Automatic collection of the lag period based on SIC: 0 to 6

Automatic bandwidth discovery by Newey-West and the Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-3.79282	0.0001	5	131
Null: unit root (assumes individual unit root process)				

Im, Pesaran and Shin W-stat	-4.87978	0.0000	5	131
ADF - Fisher Chi-square	66.8319	0.0000	5	131
PP - Fisher Chi-square	83.2369	0.0000	5	139

** Fisher evaluation probabilities are calculated using an asymptotic Chi-square distribution. All other experiments are based on the assumption of asymptotic normality.

The unit root test was developed to show the test's performance, exogenous variables, and alternate test conditions. The fundamental test outcomes are presented in the lower part of the outline output and are coordinated by both the null hypothesis and the alternative hypothesis about the type of unit root measure. The LLC, IPS, and Fisher tests fail to reject the null of a unit root, but all of the results show the existence of a unit root at the stage. Nonetheless, from the first distinction, GDP, TB, GB, INT, and MCAP are usually stationary. This means that none of the variables has a unit root.

Table 2: Regression Result
 Dependent Variable: GDP
 Method: Least Squares
 Date: 02/24/19 Time: 23:19
 Sample (adjusted): 1990 2019
 Included observations: 29 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TB	24.32593	2.511038	9.687598	0.0000
GB	1.667652	3.096757	0.538516	0.5952
INT	-523.9250	314.6570	-1.665067	0.1089
MCAP	1.239871	0.407364	3.043641	0.0056
C	4706.359	4993.274	0.942540	0.3553
R-squared	0.976274	Mean dependent var		24984.69
Adjusted R-squared	0.972320	S.D. dependent var		32815.83
S.E. of regression	5459.705	Akaike info criterion		20.20376
Sum squared resid	7.15E+08	Schwarz criterion		20.43950
Log-likelihood	-287.9546	Hannan-Quinn criteria.		20.27759
F-statistic	246.8870	Durbin-Watson stat		0.981326
Prob(F-statistic)	0.000000			

4. Discussion

The goodness of Data Fit. Data should be fitted sensible well. That is, the value of R2 ought to be sensible high in any event over 60%. The higher the R2, the fitted the data. In this model, it was discovered that R2 is 0.976274 which is very acceptable. Since 98 percent is more than 60 percent, which implies that the model is pleasantly fitted. The adjusted R2 which is 0.969760 (97%) could be additionally clarified that exchange rate, treasury bills, government bonds, interest rate and market capitalization are acceptable factors to clarify economic growth while the excess 3 percent are components or factors that were excluded from the model however been captured by error term which is equipped for affecting the reliant variables.

Coefficient of variables

The sign of the coefficients can be determined by economic theory or expectation, as well as other people's perceptions or instincts. The predicted coefficients are seen in the "Coefficient" column. The basic OLS formula is used to calculate the least squares regression coefficients.

The coefficient calculates the mean contribution of the independent variable to the dependent variable in the basic linear models discussed here, with all other variables kept constant. The slope of the relationship between the respective independent variable and the dependent variable is interpreted as the other coefficients, given that all other variables remain constant.

$$\text{GDP} = 4706.359 + 24.32593\text{TB} + 1.667652\text{GB} - 523.9250\text{INT} + 1.239871 \text{MCAP}$$

The value of the constant is 4706.359; this implies that gross domestic product will be expanding at 4706.359 units while other factors stay steady. The coefficient of the Treasury bill is 24.32593, which implies that for each unit expansion in the Treasury bill, there will be a similar unit expansion in real gross domestic product. The coefficient of a government bond is 1.667652, this suggests that for each unit expansion in government bond there will be a similar unit expansion in real gross domestic product. The coefficient of interest rate is - 523.9250, which implies that for each unit increment interest rate, there will be a similar unit decline in real gross domestic product. The coefficient of market capitalization is 1.239871; this implies that for each unit expansion in market capitalization, there will be a similar unit increment in real gross domestic product.

F-statistics: This tests the joint significance of the variables employed. To describe the dependent variable, the independent variables must be mutually relevant. The F-test can be used to verify this. We will deny the null hypothesis and consider the alternative hypothesis if the p-value of the F statistic is less than 5% (0.05). If not, we should do the same.

Test of Hypotheses

Decision rule: If the p-value of t statistics is less than 5%, we will reject the null hypothesis and accept the alternative hypothesis (0.05). Alternatively, we reverse the process.

Hypothesis One:

H₀₁: Treasury bills have no significant effect on Real Gross Domestic Product (GDP) in Nigeria.

H₀₂: Government bonds have no impacts on Real Gross Domestic Product (GDP) in Nigeria.

H₀₃: Interest rate has no significant relationship with Real Gross Domestic Product (GDP) in Nigeria

H₀₄: Market capitalization has no significant relationship with Real Gross Domestic Product (GDP) in Nigeria.

The p-value of the Treasury bill is 0.0000, which is less than 0.05 percent degree of importance, according to the results in table 2. As a result, the analysis rejects the null hypothesis and accepts the alternative. In light of this, the study claims that Nigeria's Treasury bill has a vital relationship with actual GDP. This means that the government should make adequate use of the country's treasury bills to boost the country's actual GDP.

Furthermore, as seen in table 2, the p-value of the Government bond is 0.5952, which is significantly higher than the 0.05 percent range of importance. As a result, the analysis accepts the null hypothesis while dismissing the alternative hypothesis. Given this, the analysis assumes that government bonds in Nigeria have no significant relationship with actual GDP. This implies that financial institutions should stop issuing government bonds because it has a negative impact on the country's actual GDP.

The p-value of the interest rate is 0.1089, which is higher than the 0.05 percent range of importance, as seen in table 2. The research accepts the null hypothesis and refuses the alternate hypothesis in this way. As a result, the report concludes that interest rates in Nigeria have no meaningful relationship with actual GDP. This implies that interest rates should be directed efficiently and held within reach for firms to obtain credit and invest in their manufacturing operation. This would aid in the expansion of the economy's actual GDP.

At last, from the data in table 2, the p-value of Market capitalization is 0.0056 which is under 0.05 percent level of significance. Thusly, the study dismisses the null hypothesis and acknowledges the alternative hypothesis. In light of

this, the study reasons that Market capitalization has a critical relationship with real Gross Domestic Product in Nigeria.

Discussion of findings

The study set out on the examination of the relationship that exists between the financial market and economic growth in Nigeria. Data identifying with Treasury charge, government bonds, interest rates, market capitalization and gross domestic product were gathered for a time of 30 years (1990-2019) to test the expressed speculations. Unit root test as directed on the data and the factors were discovered to be fixed. Relapse result uncovered that Treasury bill is genuinely critical ($p < 0.000$), a government bond is measurably unimportant ($p > 0.5952$), Interest rates were likewise discovered to be measurably immaterial ($p > 0.1089$) while Market capitalization was discovered to be genuinely huge ($p < 0.0056$). The ramifications of these outcomes are that lone Treasury bill and Market capitalization are equipped for affecting economic growth in Nigeria which was proxied by real Gross Domestic Product (rGDP) as indicated by the aftereffect of the study.

5. Conclusion

This study analyzed the impact of the financial market on economic growth in Nigeria. It covers the time of 30 years. The aftereffect of the data investigation uncovered that the Treasury bill positively affects gross domestic product and was discovered to be genuinely huge ($t = 9.687$, $p < 0.000$), given this, the study infers that the Treasury bill has a critical relationship with Gross Domestic Product in Nigeria. Government bond was found to show a beneficial outcome on the gross domestic product yet is measurably irrelevant ($t = 0.5385$, $p > 0.5952$), subsequently, the study infers that Government bond has no critical relationship with Gross Domestic Product in Nigeria.

Interest rate negatively affects gross domestic product and is additionally genuinely immaterial ($t = -1.665$, $p > 0.108$), in light of this outcome, the study reasons that interest rate has no huge relationship with Gross Domestic Product in Nigeria.

In conclusion, market capitalization was discovered to be emphatically identified with the gross domestic product and measurably critical ($t = 3.043$, $p < 0.005$), consequently, the study infers that Market capitalization has a huge relationship with real Gross Domestic Product in Nigeria. To summarize, given the outcomes acquired, the study presumed that the financial market significantly affects economic growth in Nigeria.

The discoveries of this study are following the discoveries of Hassan, Babafemi and Sulong (2015). In any case, the discoveries of this study are not in line with the discoveries of Adebisi and Arikpo (2017); Umar, Ismail and Sulong (2015). As a result of these findings, the study indicates that strategy makers should allow foreign direct investment funding in the region to ensure an increase in market capitalization. In addition, the stock market must be energised and strengthened; more businesses should be encouraged to list on the market's floor. Given their near affinity with grass-roots fund mobilization ability, small and medium-sized businesses should be allowed access to the market for investible funds.

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