THE NIGERIAN MONEY MARKET AND ECONOMIC GROWTH: ECONOMETRIC REVIEW

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ABSTRACT

The study investigates the impact of the Money Market instruments on Nigerian economic growth, reviewing closely related theories and empirical studies that utilizedlongitudinal data for several decades. The use of econometric techniques such as the Unit root test employing the Augmented Dickey Fuller method, Johansen Cointegration Test, Pairwise Granger causality test and finally used the Error correction Model to estimate return to equilibrium. The test conducted revealed that there exist's a positive,significant and substantial relationship between value of outstanding Treasury Bills and aggregate Bank Credits to the economy and discovered positive, growing and substantial relationship between money market operations and economic output. It was thus recommended that Deposit Money Banks should surge credits facilities towards businesses in the nation at rates determined by the market forces as it possesses positive/growing potential in fostering the performance of the economy and government should specifically source funds from the Money Market towards meeting its short term capital and developmental needs to foster growth and development of the nation.

Keywords: Money Market, Treasury Bill, Commercial Papers, Aggregate Bank Credit, Gross Domestic Output.

INTRODUCTION

One of the two prominent financial market in an economy is the Money Market. In a modern economy the Money Market continues to play a very functional and significant role. Furthermore, the money market is often topic of debate amongst financial expert, scholars and practitioners discussing the role of financial intermediation, its objective in a nation and how it promotes trading of short-medium term debt instruments in order to meet the needs and obligations of larger fund users inclusive of governments, financial institutions such as banks,

private companies and other related institutions (Ehigiamusoe, 2013). Investment that facilitates liquidities and as well provides timely income needs short term funding (Ikpekan and Osabuohien, 2012) and the success or failure of any economy borders on the viability of its financial system (Ikechukwu, 2013).

The market (money market) serves as a major classification of the financial market. It is majorly concerned with short term funds. Money market facilitates short term investment opportunities as it deals in short term funds. Largely via an efficient intermediating cycle, the money markets promotes the level of productivity of investments by the fluid movement of capital to profit oriented investment projects and opportunities which is paramount to economic output (Ehigiamusoe, 2013). According to Ogege and Shiro (2013), money market ensures the adequacy of the stock of money to service the needs of the economy and facilitates the transfer of money between economic units usually from areas of surplus to areas of deficits/needs.

According to Ikpekan and Osabuohien (2012) Money market serves as a market in which short term liquid assets of not over a year a trade i.e. bought and sold, it lack a central location, telephone, faxes, telex and other communication form acts as mediums in which the money market is consummated on, securities prices are princely determined by the influx of the public sectors monetary policies which are annually issued and are monitored by the apex bank of the nation. They possess very superior, and almost reduced risky financial assets which includes savings in diverse form, certificates of deposit either negotiable or non-negotiable, deposit certificates, bankers' acceptance, commercial-papers, treasury-bills, treasury-certificate and call monies. Sundharam and Varshney (1978) contended that the Occurrence of the capital market relies on the presence of a systematically organized money market as this two aforementioned markets subsequently enrich the contribution or addition to development and growth of the nation.

In Olowe (1997) submission, he emphasized that the money market represents a market in which monies are being invested for periods extending towards a year level of maturity. The various securities and financial instruments also called the money market instruments inherent in the system are traded, Odife (1984) mentioned that the money market houses financial claims of maturity of five years or less as it is essential a vital framework in buying and selling short term financial instruments.

Kakawa (2005) and CBN (2004) viewed the Money Market as being a lot more like a wholesale market for the trading of low, high and short term debt instruments. As short term instruments of debt are likened to instruments of less than a year. Treasury bills are traded in the money market in Nigeria, coupled with commercial papers and banker's acceptances. The centre of the actions inherent in the money-market takes places amidst financial dealers such as discount houses and banking institutions, through which various activities are carried on with the money markets instruments.

From a universal perspective, Agbada and Odejimi (2015) and Jalloh (2013) contended that Money Market has increased world trade and is crucial in the promotion of global financial integration as it deals with the trading of currencies, interest rate futures and options. An efficient domestic financial market is an indispensable factor in the positioning of a country's competitiveness in relation to other economy's market for global capital.

In bank liquidity management, the money market plays a key role especially in the monetary policy transmission. As it ensures the provision for usable instruments and liquidity trading otters, it also allows for refinancing of medium and short term positions which ensures the Movement and control of liquidity risk in businesses which also represents domains in which the monetary policy operates. (Ehigiamusoe, 2013). Agbada and Odejimi (2015) further posits that money market operations provide the mechanism via which short-term securities and other financial assets with maturity period of less than one year are traded. Money Market instruments which are highly liquid assets provide facilities and means for short-term lending and borrowing. According to Oba (1999) the Money-market is an institutional short term arrangement where capital (funds) are being sourced. Hence the money market funds are essential for the corporate and public sector in the economy that require short term funds.

The money market development creates a fluid financial intermediation progress which boosts economic lending and promotes social and economic welfare (Iwedi and Igbanibo, 2015).

A special need for the money market arises from the condition that banks and other deposit-receiving institutions hold non-interest bearing deposits at a minimum by investing excess reserves in the money market and can also raise funds quickly to satisfy reserve requirements by borrowing in the money market. Essentially, money market brings together surplus and deficit economic agents together with the aim of lending and borrowing large sum of money on a short term bases (Ojo, 2010).

Despite the boom witnessed by the money market over time in form of its expansion, various problems still exists which has battled with the system overtime, the financial market still appears shallow in comparison to the money market especially in developing and developed nations (Ehigiamusoe, 2013). The Nigerian money market seem to be operating sub-optimalya condition not healthy for desirable growth of the economy. Additionally, (Ezirim, 2005) have found discount houses to have performed poorly in the past.

The money market assets is made of two composition namely Treasury Securities and Private securities. The Treasury securities comprises of treasury bills, treasury certificates, development stocks and FGN bonds while the private securities is made up of certificate of deposit, commercial papers and bankers' acceptances. As the country is making effort to be among the 20 developed economies by the year 2020, it is essentially pertinent to investigate and explore the relationship between money market and Nigeria's economic performance so as to use the subsisting result to make policy recommendation to policy makers to align quickly to be able to meet the challenges facing it to realize the 20:20:20 vision. Several studies have been conducted on the subject matter which include Mordi (2010), Adeoye (2007), Nwosu and Hamman (2008), Ehigiamusoe (2013), Ikpefan and Osabuohien (2012) and Iwedi and Igbanibo (2015). However, this research is undertaken to take a long term analysis of relationships existentamong money market operations and the growth of the economy from 1960 to 2014 in view of the peculiar present economic realities in Nigeria. In furtherance of the theoretical debates on the relationship between economic growth and money market activities in the nation lingers, there is the need for related and beefed up works to establish the direction of relationship in a developing nation like Nigeria utilizing current data.

This research therefore attempts to evaluate the money market operations and economic growth nexus in Nigeria as it evaluates the log run influences of influence of Treasury Bills (TB), Commercial Papers (CP) and Aggregate Bank Credits (ABC) on a single economic performance measure which is the Gross Domestic Product in the nation over a period of 1960 to 2016, This research will be of profound benefit to the government in terms of raising short term capital from the money market for the execution of government programmes and projects. It will be beneficial to the monetary authorities in the achievement of macro-economic objectives.

This paper is structured as follows: The second part of the theoretical framework, Section 3 presents the methodology of the research. Section 4 mull over the empirical output acquired in the assessment of the formulated model. Section 5 abridges the main findings, recommends and then conclusions.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW
This section reviews related empirical and theoretical underpinning of the subject matter:

Theoretical Framework:
Financial Intermediation Theory
The intermediation theory has received much recognition in classical relevant works Goldsmith (1969), McKinnon (1973), Shaw (1973), Dabwor (2009), Mordi (2010), Ojo (2010) and Nnamdi and Onoh (2014) Bringing to light the beauty of the financial market, which consists of both the capital and money market that performs very Germaine role in the nations emancipations, the quality and quantity of services rendered demarcates the differences between nations. According to Goldsmith (1969), The relationship existent between gross national product and financial development is positive/growing which is based in the influx of the financial development due to the efficient utilization of capital stocks. Also the economic growth process has influenced the financial market in the nation as it has created incentives towards fostering financial development, hinged on this theory is Mckinnons thesis, which came as an inverse to existent theory of Neo-classical growth, he opined that, there is an existence of complimentary relationship between the capital and monetary stocks which takes a toll on the demand for money, this arguments provised an articulation facet for money demand in term so direct and accumulation of physical capital due to the money supply conditions which influences the decision to invest and save.

In furtherance of this, Shaw (1973) extended the aforementioned via the debt intermediation hypothesis, in which the expansion of financial intermediation via savings and investments based on liberalizations of finance herals a higher interest rate of return in real terms and leads to an increment of development and the savings and investment incentives which would foster economic development as credit supply will stimulate investment and foster the efficiency of average investment, Dabwor (2009) in line with shaw stated that this emphasizes the substantial of the free entrance into the competitive domain inherent the financial market as a prerequisite to porous financial intermediation.

McKinnon (1973), and Shaw (1973) In this line were of the opinion that the various employed policies could have a consequential influence in the financial market which could gravely affect the savings incentives and motivation due to the repression in the market

(financial), the key facet of this repression includes amongst others: heightened deposit reserve requirements, presence of ceiling on bank loans and deposits, foreign currency restrictions and entry barriers, despite the McKinnon and Shaw employed framework which boostd many less developed nations to create and change their financial sectors, it was still discovered that it failed to put to cognizance the microlevel influxes inherent the financial market and various institutions, This consequently affected the savings supply and credit demand by agents in the economy which led to the development of the agency theory of the same financial intermediation. The financial and real economic sector connection has been confirmed overtime by analysis in the economic and financial realm as they are vital factors towards the improvement of economic growth and development. But they failed to distinguish the theoretical relationship existence between economic growth and financial develolment. According to Ehigiamuseo (2013), various nations were assisted by the financial system via financial resource mobilization and resource reallocation, which led to development followed closely by the financial system which disbursed funds to them accordingly. The more the financial system progressed, the more funds were applied efficiently which decreased the transfer Costs and further reduced savers and borrowers risks. The intermediaries allowed more swift allocations of available resources in the nation which fostered the level of accumulation of capital and economic growth. Which led shareholders and financiers to increase consequently the amount ofinvestment interaction and particpation in financialmarket. According to Mordi (2010) the Intermediaries led to more efficient savings allocation and investments and foster capital accumulation rate in the nation.Since no nation can grow and promote its per capita living standard without an efficient financial sector, therefore a quality and sound financial sector development and banking system is required for fluid growth and development of the economy.

Fry's Theory

This theory centred on money market interest rates and financial development. According to Fry (1997) inIwedi and Igbanibo (2015) finance and financial institutions have become relevant in a world of positive/growing information, transaction and monitoring costs and if monitoring costs are high, a sample debt instrument would dominate a more complicated state that resembles equity. Positive/growing real interest rates act as incentive to savers and also boost banks to give credit to the most efficient firms which can make profits to pay the high rate of borrowing.

In a recent research, Iwedi and Igbanibo (2015) contended that over the years, policies regarding financial development of emerging market economies have shifted towards market-based financial systems and lessons learnt from financial crises. The approach to financial policy in developing economies has moved from mainly direct controls to more market oriented systems. As Fry (1988) highlighted the functions of money markets, he contended that the real rate of interest can be lowered by financial repression as liquidity preference propels the real cost of fund above its equilibrium level. He emphasizes that money markets in which interest rates are freely determined by interaction of supply and demand are few and far in between the developing world. Market forces does not freely determine interest rate in an emerging economy.Fry(1988)contended that a measure of financial intermediation ussually employed is the real interest rate. When this rate hovers below its competitive levels this indicates the

extent of financial repression. A positive/growing real interest-rate boosts financial savings and financial intermediation leading to an increment in the supply of credit to the private-sector and hence investment. According to Fry (1997) in Iwedi and Igbanibo (2015), an essential aspect of financial freedom is the development of the money market in which the independent central bank will implement indirect monetary policy. In his opinion, the absence of progress in the areas concerning the influence of financial development on growth follows directly from the fact that no attention is paid to the nature of banking or financial markets.

Economic Growth Models

This section highlights the various economic theories and model for the promotion of output of goods and services for the general economic wellbeing of society.

Modern Growth Theory

This theory which was propounded by the likes of Grossman and Helpman (1991), Lucas (1988) and Romer (1986) in Mordi (2010) Placed emphasis on two major lines on which a nations financial sector influence its long run growth and development, they include amongst others promotion of capital accumulation which is a conglomerate of physical and human-capital and an the fostering of the technological progress. It houses five major objectives which includes but no limited to savings pooling and mobilization, information production and capital investments allocation, investment monitoring and corporate governance extortion, trade facilitation, risk management and diversification, this lines are active informed the promotion of investment and savings mobilization, boost of capital inflows and efficient capital allocation.

Endogenous Growth Models

This came as a counter to the Solow model, as it is based on the short coming of this model, which manifested in its inability to explain fully the growth rate complications seen in various nations, paving way for the incorporation of the financial market, under this theory it can be seen that financial development could influence nations growth in three distinct ways, financial intermediation raised efficiency, social marginal productive increase in capital and fostering of private savings rate. This in turn ensures progression of technical prowess of a nation, and creates a fluid functional financial system as well as physical capital, it fosters productive financial services and broaden activity innovativeness as affirmed by related literatures.

Levine (1997) buttressed the financial intermediaries information roles under this model as it explains that it is essential to productivity increment. Bencivenga and Smith (1991) in similar manner emphasized that national growth will be evidence in presence of liquidity risk reduction, stimulated savings and prudent investment. Levine (1997) in similar manner opined that stock markets are vital in the stimulation and financing of liquid investment project in an economy via the modeling of a dual relationship between national growth and the financial markets. Also emphasized in this line by Saint-Paul (1992) is the stock market development which is anticipated on national growth fostering, as it influences entrepreneurs risk sharing, this theory therefore adds to the comprehension of the growth relevance of financial development which is loosely investigated by neoclassical models.

Empirical Literature

Ogege and Shiro (2012) evaluated banking roles on growth potentials of the Nigerian economy. The Longitudinal data for the research were derived from the National Bureau of Statistics and CBN bulletin from 1974 to 2010. The Co-integration, ECM and structural analysis were utilized. To test for unit root, they used the most frequently tested and acclaimed methodology of ADF and PP. At the end of the analysis, they discovered that there exist a long run relationship between the criterion and the predictor variables.

Akpansung and Babalola (2012) evaluated the relationship between bank credit and national growth in the nation overthe tenor 1970 to 2008. The causal relationship existent between the employed variables was evaluated utilizingthe pairwiseGranger-Causality test for theregression models. The results of Pair wise Granger-Causality test signifies the presence of uni-directional causalrelationship from GDP to Private-Sector Ccredit (PSC) and from Industrial Production Index (IND) toGross Domestic Product. Estimated regression models indicate that private sector credit influences positive/growingly on economicoutput over the period of coverage in this research.

Kolapo and Adaramola (2012) investigated the influence of the capital market on its national growth over the period of 1990 to 2010.The national output was deciphered by Gross Domestic Output largely known as GDO while the considered capital market indicators included; the Market Capitalization rate, Aggregate Total New Issue, Total stock trade, and Aggregate Listings on Equities and available Government Stocks. Implementing Johansen Co integration and pairwise Granger Ccausality tests, it was discovered that the Nigerian capital market and economic output are cointegrated. This shows a long-run existent relationship between the long run capital market and national output in Nigeria.

Ehigiamusoe (2013) studied evaluates the relationship of money-market andeconomic output in Nigeria. Utilizinglongitudinal data over the research period 1980 to 2012. OLS estimation technique,Johanson's Co-integration Test and VEC Modelwere implemented to find empirical backup for the relationship in the short-run as well as the long-run approach.The research shows statistically clear that a long run bilateral relationship existentamong money market and economic output of Nigeria. However, the current contemporary reality shows the Nigerian money market as a robust player in the financial system inversely related to the production of goods and services.

Nwakanma, Nnamdi and Omojefe (2014) analytically studied Loans and advances to the nation's private sector and its significance in the nation's economy.The data covered 1981 to 2011. Utilizingthe Auto-regressive Distributed Lag Bound (ADRL) and Pairwise Granger-Causality test were employed for the analysis. The outcome shows substantially long run relationship between the employed researchvariables but with a non-directional insubstantial causality.

Nnamdi and Onoh (2014) investigated the causal influence of Nigeria's stock market pperformance onNew Issues in line with the Bhole' contention to test the causal relationship between market capitalisation and New Issues. Unit Root test and Granger Causality were applied on 1970-2011 data and found stationarity of longitudinal data and substantial bi-directional causality between the variables.

Yakubu and Affoi (2014) studied the influence of the commercial banks credit on national development inNigeria over the period of 1992 to 2012. From the research, Deposit

Moneybank loans to the private-sector in the economy was utilized in estimating its influence onthe nation's economic growth, whichis proxied by GDP. utilizing the Ordinary-Least Square estimation technique, it was therefore discovered that the Deposit Moneybank loans havesubstantial influence on the economic output in Nigeria.

Agbada and Odejimi (2015)explored developments in Money market operations and Economic viability in Nigeria. Economic viability was proxied byGross Domestic output (GDP) and core Money Market instruments of Treasury Bills (TB), Treasury Certificate (TC), Certificate of Deposit (CD),circulated Commercial Papers (CP) and available Banker Acceptances documents (BA) served as the independent variables.

Nnamdi (2015) evaluates the comparative efficacies of credits of banks to the private sector as well as public sector of the economy of Nigeria as it relates with economic performance. Sophisticated econometric tools of Augmented Dickey Fuller (ADF), Johansen's Cointegration, Error Correction Model together with paired Granger Causality. The data were got from Statistical Bulletin from 1981-2011. There is an evidence of a substantial long run relationship between the variables. The output show bi-causality between bank credit specifically to the nations private sector and public sector.

Iwedi and Igbanibo (2015) investigates the linkages between money market operations and national output within the borders of Nigeriautilizing longitudinal data from the CBN Statistical Bulletin covering 1980 to 2013.The employed descriptive analytical statistical tools and quantitative econometric technique of the Vector Autoregressions, Co-integration, and Pair wise Granger-Causality tests were employed in the analysis of the data. The findings reveal that there is a positive/growingly substantial short run and long run relationship existent between money market operations and national growth in the nation.

Raja and Mahalakshmi (2015) evaluated the influence of money market in India taking cognisance of the economic development realities in the country's economic space. The research emphasized the relevance of the financial market in equilibrating liquidity of banks by the application of reserve requirement ratio (RR) and Liquidity Ratio (LR). They conclude that money market promotes the control of monetary policy, money supply, credit-creation activities and control, inflation rates and general economic policy of the country.

METHODOLOGY
Data and Variables Description:
Recognizing the research's specified aim and objectives, longitudinal data is utilized. Secondary data were obtained from various sources, which include; annual reviews from various statistical websites and Central Bank of Nigeria Statistical Bulletin (various issues) and indexmundi.com. The period covered spans from 1960 to 2016, as presented in appendix 1a and 1b.

Model Specification
In order to capture the interrelationship of the various underlying variables such as the Money Market instruments such as Treasury Bills (TB), Commercial Papers (CP) And Aggregate Bank Credits (ABC) on Economic performance as proxied by Gross Domestic Product (GDP), the research therefore specifies the following model:

GDP = f (TB, CP, ABC)---1
Restatement in the mathematical form brings the above to the following form:

$GDP_t = \beta_0 + \beta_1 TB_t + \beta_2 CP_t + \beta_3 ABC_t$ --2

Where
GDP   = Gross Domestic Product
TB   = Outstanding Treasury Bill
CP   = Outstanding Commercial Papers
ABC   = Aggregate Bank Credits to the economy
μ = Error term
$_t$ = time period
β_0 = intercept or constant in the model
$\beta_1 - \beta_3$ = Coefficients of the incriterion variables.

Apriri Expectation

On apriori, a positive/growing relationship is expected amongst employed variables. (β_1, β_2, $\beta_3 > 0$).

Operationalized Variables

The Gross Domestic Product (GDP) is proxied by the Real Gross Domestic Product i.e. at current price which is the criterion variable overhauling the place of economic performance as it represents the aggregate money value of goods and services produced in an economy during the period considered, irrespective of the country of the producers, The predictor variables includes Treasury bills (TB) which are widely known as high liquidity debt instruments guaranteed by the government and issued by the Central Bank Nigeria. It is considered risk-free and the tenor is 90 days 364 days, The Commercial Paper (CP)represents unsecured promissory note issued by a company as an evidence of borrowing from the public. It is a direct indebtedness of the company to the shareholders and financier while the Aggregate Banks Credits (ABC) represent money market instruments which involves all bank credits granted to individuals, corporate organisations and governments within the duration of time under consideration.

Techniques of Data Analysis
Multiple Regression (Ordinary Least Square):

The standard regression outputs are estimated in two sections which includes the Coefficient Results and the Summary Statistics:

Standard Error of the Regression (S.E. Of Regression)
The standard error is a precipitate measure based on the predictable variance of the error term.

Durbin-Watson Statistic

The Durbin-Watson statistic accesses the auto correlation in the error term. In line with a rule of thumb, if the Durbin Watson is less than 2, there is an evidence of positive/growing auto or serial correlation.

F-Statistic

The *F-statistic*: is an overall test of a research underlying hypotheses of the coefficients slop inherent a regression to determine if it equates to zero. If the F-statistic is greater or higher than the critical level, this signifies the probability of the coefficients to be non-zero.

Decision rule 1: If p-value(s) < α, reject H_o . If p-value(s) > α, do not reject H_o.

Decision Rule 2: instructions: Peruse a critical value (F*) and link it to your test statistic. Critical values (F*) are the F scores Tabulated in correlated with the level of significance (α).

Unit Root Test

The stationarity of series utilized for this research was determined with the estimation of unit root. Dickey Fuller (DF) unit root test might be estimated from the following forms of equations. Based on the following regression equation:

$\Delta Y_t = \alpha + \beta T + \delta Y_{t-1} + \gamma_i \Delta Y_{t-i} + \varepsilon_t$

Hypothesis:

$H0 : \boxed{} > 0$ (there is unit root in the series).

$H1 : \boxed{}\boxed{} < 0$ (the series are stationary)

Decision rule: Reject H_0 if test statistic is less than critical values, otherwise do not reject. (Haris and Sollis, 2004) Elliott et al. (1996).

Co-integration

The research applied Johansen Co-integration Rank Test utilized in ascertaining and determining the co-integration rank of variables as a prerequisite or condition to model with Vector Error Correction Model is that there must exist a co-integration relationship (Adbullahi et al, 2012) Cointegration test is utilized to ascertain the presence of potential long run equilibrium relationship between two variables (Awe, 2012) and expressed as:

Yt = μ+T Yt-1 + Ɛt

Δxt = k X−1 i=1 ГiΔxt−i + Πxt−1 + μ0 + ΨDt + εt.

Decision rule: Accept H_0: (there is no substantial cointegration relationship) if t- statistic is greater than asymptotic critical - value or if the p − value is below the significance level, otherwise accept $H1$: (there is substantial cointegration relationship) if test statistic is less than the asymptotic critical values or if the p- value is greater than the level of significance.

Parsimonious Dynamic Error Correction Model

This seeks to correct the error in the model. Error Correction Models (ECMs) entails a series of longitudinal models which seeks to appraise the amendment speed at which a criterion variable returns to equilibrium after a change in an Predictor variable.

Estimation of ECMs of the form:

k X−1 i=1 ГiΔxt−i + Πxt−1 + μ0 + ΨDt + εt.*et* 1 + *vt*🞮

(Banerjee et al. 1993; Hamilton, 1994; Johansen 1995)

ECMs are useful for appraising the long and short term influences of one longitudinal on another. This research will utilize vector Error correction model.

Granger Causality

This is a statistical and empirical hypotheses evaluation test for examining the forecasting ability of one variable against another i.e. how they support or promote each other, (Engle and Granger, 1987; Granger, 1981).

Decision Rule: If p-value(s) < α, reject H_o . If p-value(s) > α, do not reject H_o.

PRESENTATION OF RESULTS

Presentation of Stationarity (Unit Root) Tests:

This section, intends to evaluate the data set generated in previous section it will entail the unit root test utilizing the Augmented Dickey Fuller (ADF) test to evaluate the stationarity of the variables employed for the research. The result of the unit root test is presented as follows here under:

Table 1. *Result of Stationarity (Unit Root) Tests:*

Variable	ADF t-statistics	Critical Value 5%			Order of Integration	Prob.
		1%	5%	10%		
D(GDP)	-3.920794	-3.699871	-3.699871	-3.699871	I(1)	0.0059
D(TB)	-2.673256	-2.619851	-1.948686	-1.612036	I(1)	0.0997
D(CP)	-6.851721	-3.592462	-2.931404	-2.603944	I(1)	0.0100
D(ABC)	3.778953	-2.616203	-1.948140	-1.612320	I(1)	0.0999

Using both 1% and 5% Substantial Level.

Source: Eview 10 Output (Authors Computation and Compilation)

Note: D(GDP), D(TB), D(CP) and D(ABC) are differenced value of Gross Domestic Product (GDP), Treasury Bills (TB), Commercial Papers (CP) And Aggregate Bank Credits (ABC) respectively over the research period.

The table above displays that the absolute ADF statistic values are higher than those of Mackinnon testCritical values at all levels and the accompanying probability estimates are all less than 0.05, the preferred significance level therefore, acceptable. The result of the unit root outputshows that all employed variables are integrated at order 1(1).

Presentation of Johansen Co-integration Test Results:

The results of Johansen's cointegration tests for all the longitudinal variables of this research are presented in Table 3 below:

Table 2. *Result of Johansen Unrestricted Co-integration Rank Test (Trace)*

Obs	Series	Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	P 0.05 Critical Value	Prob.**
56	D(GDP), D(TB),	None *	0.968322	319.9219	47.85613	0.0001

D(CP), D(ABC)	At most 1 *	0.848946	140.4107	29.79707	0.0001
	At most 2*	0.516731	42.12455	15.49471	0.0000
	At most 3*	0.079561	4.311063	3.841466	0.0379

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
Source: Eview 10 Output (Authors Computation)

From the above table, the Trace Statistic is greater than the 0.05 Critical Values in just three out of the four equations. Thus, the co-integration results reported reveals the rejection of the null hypothesis of no existing co integration. The test output shows a co integrating relationship among the criterion variable and the predictor variables. It can thus be concluded that there exist a substantial long-run relationship between Criterion variable, Gross Domestic Product (GDP) and the Predictor variables (outstanding values of Treasury-Bills, Commercial Papers and Aggregate BankCredits).

However, the author acknowledges that a shift from this relationship is possible due to changes in employed variables within the short-run. Thus, we adopted the Error Correction Estimates (ECE) to examine and correct any short run changes in the variables under research. Hence, having established Co-integration, (ECE) is specified to show the short-run changes in the variables under research while preserving the long-run relationship.

Table 3: Analysis of Error Correction Estimates

Criterion Variable: GDP
Method: Least Squares
Date: 10/23/17   Time: 01:52
Sample (amended): 1961 2016
Included observations: 56 after amendments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	158520.8	524127.6	0.302447	0.7636
TB	8.500437	1.599797	5.313447	0.0000
CP	13.52726	3.583843	3.774511	0.0004
ABC	1.772915	0.320020	5.540023	0.0000
ECM(-1)	-1.248800	0.207258	-6.025325	0.0000

R-squared	0.960721	Mean criterion var	7400698.
Amended R-squared	0.957515	S.D. criterion var	15958298
S.E. of regression	3289323.	Akaike info criterion	32.93828
Sum squared resid	5.30E+14	Schwarz criterion	33.12245
Log likelihood	-884.3336	Hannan-Quinn criter.	33.00931

F-statistic	*299.6217*	*Durbin-Watson stat*	*1.644573*
Prob(F-statistic)	*0.000000*		

Source: E-view 10 Output (Authors Computation)

The ECE estimation output (Table 4) reveals that the predictor variables jointly account for about 96.07 percentage shocks in Gross Domestic Product, criterion variable. The Durbin-Watson statistics (1.64) is within the acceptable range and shows no presence of auto correlation. The Error Correction Model (ECM) is of the expected adverse sign and also statistically substantial at 5% level of significance. The absolute value of the coefficient of the Error Ccorrection Term indicates that about 125% of the disequilibrium in the level of Gross Domestic Product is offset by short run amendment in each year. The associated F-Statistic value of 299.6217 is statistically substantial at the 5% (0.05) significance level, which confirms a good line of fit.

The estimation output alsodisplays that the all predictor variables value of the Treasury Bills (TB) and Aggregate Bank Credits (ABC) are statistically substantial in explaining variability in Gross Domestuc Product (GDP) in Nigeria at 5% level of significance. The probability coefficient associated with value of Treasury Bills (TB) is 0.0000, Commercial Papers (CP) is 0.0004 and that of Aggregate BankCredits (ABC) is 0.0000, all of which are less than 0.05 level of significance and indicating a substatntial statistical relationship with the Criterion variable, Gross Domestic Product (GDP). However, value of Commercial Paper (CP) according to the result is not statistically significance in explaining variation in Gross Domestic Product (GDP) at 5% (0.05) significance level, the research proceeds to test for causality using Pair-Wise Granger Causality Test.

Table 4. Granger Causality Test Output (Pairwise).

Pairwise Granger Causality Tests
Date: 10/23/17 Time: 01:58
Sample: 1960 2016
Lags: 2

Null Hypothesis:	*Obs*	*F-Statistic*	*Prob.*
D(TB) does not Granger Cause D(GDP)	*52*	*8.92829*	*0.0005*
D(GDP) does not Granger Cause D(TB)		*15.1795*	*8.E-06*
D(CP) does not Granger Cause D(GDP)	*52*	*22.4468*	*1.E-07*
D(GDP) does not Granger Cause D(CP)		*0.90300*	*0.4123*
D(ABC) does not Granger Cause D(GDP)	*52*	*27.8229*	*1.E-08*
D(GDP) does not Granger Cause D(ABC)		*2.02049*	*0.1439*
D(CP) does not Granger Cause D(TB)	*52*	*0.90499*	*0.4115*
D(TB) does not Granger Cause D(CP)		*7.15711*	*0.0019*

D(ABC) does not Granger Cause D(TB)	*52*	*19.4615*	*7.E-07*
D(TB) does not Granger Cause D(ABC)		*3.71761*	*0.0317*
D(ABC) does not Granger Cause D(CP)	*52*	*31.3612*	*2.E-09*
D(CP) does not Granger Cause D(ABC)		*12.9456*	*3.E-05*

Source: E-view 10 Output (Authors Computation)

The above output of the Pair-wise Granger Causality tests presented in the table 4.6 above show the following (using 0.05 level of significance);
i. Bi-directional causalities does not exists amongst employed variables
ii. Uni-directional causalities prevail between value of Treasury Bills (TB) and Gross Domestic Product (GDP). The direction of influence stems from Treasury Bills (TB) to value of Gross Domestic Product (GDP).
iii. it was observed that no directional causal relationship exist between other employed variables are they sustain an endogenous progression overtime.

Pairwise Granger Causality Tests
Date: 11/19/17 Time: 14:48
Sample: 1960 2016
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
D(ABC) does not Granger Cause D(GDP)	54	52.2743	7.E-13
D(GDP) does not Granger Cause D(ABC)		6.36022	0.0035
D(CP) does not Granger Cause D(GDP)	54	1.04836	0.3582
D(GDP) does not Granger Cause D(CP)		0.05506	0.9465
D(TB) does not Granger Cause D(GDP)	54	8.88040	0.0005
D(GDP) does not Granger Cause D(TB)		29.6400	4.E-09
D(CP) does not Granger Cause D(ABC)	54	10.0384	0.0002
D(ABC) does not Granger Cause D(CP)		3.14821	0.0517
D(TB) does not Granger Cause D(ABC)	54	4.48483	0.0163
D(ABC) does not Granger Cause D(TB)		14.5711	1.E-05
D(TB) does not Granger Cause D(CP)	54	9.71349	0.0003
D(CP) does not Granger Cause D(TB)		2.72486	0.0755

Discussion and summary of Findings
The discoveries from the analysis indicate that there exists a positive/growing and substantial relationship between value of outstanding Treasury Bills and aggregate Bank Credits

to the economy with probability of 0.0084 and 0.0126 respectively. The Coefficient of Determination (R^2) of 0.7957 shows that money market accounted for 79.57 percent variability in the output growth of the economyover the research period. The absolute values of the output coefficients of the Error Correction Estimates signifies that approximately 66.56% of the imbalances in the Gross Domestic Product is trimmed by short-run amendments annually. The result is in line with Iwedi and Igbanibo (2015) and Agbada and Odejimi (2015) that found that a positive/growing and substantial relationship between money market operations and economic output is existent. The existence of substantial relationship between aggregate bank credits and economic output (GDP) is also in consonance with Eatzaz and Malik (2009), Murty et al (2012) and Akpansung and Babalola (2012) that assert that private sector bank credits support the economy substantially. Value of Outstanding Commercial Papers have a positive/growing but insubstantial relationship with Gross Domestic Product.

The output of the empirical analysis is also in tune with the financial intermediation theory exemplified in McKinnon (1973), Shaw (1973), Bhole (2006), Goldsmith (1969), and Nnamdi and Onoh (2014) that the financial markets which includes both the money and capital markets play crucial and central role in the economy emancipation and financial liberalization via financial development, which is incentive for sustainable economic growth.

CONCLUSION AND RECOMMENDATION

This research gauges the Money Market and economic performance relationship in Nigeria, reviewing several related theories with empirical evidences utilizinglongitudinal data spanning over 1960 to 2016. Literature was reviewed in conjunction with theoritical background as regards financial intermediation theories. Econometric techniques were implemented and the findings show a positive/growingly substantial relationship between value of outstanding Treasury Bills and Aggregate Bank Credits and economic growth with P-values of of 0.0084 and 0.0126 respectively. The Coefficient of Determination (R^2) of 0.960721 shows that Money Market accounts for 96.07 percent variation in the criterion variable (GDP). Error Correction estimate (ECE) displays the required adverse sign which appears to also be statistically substantial at 0.05 significance level. The coefficients absolute value in the Error Correction Estimate displays that approximately 66.56% of the existing disequilibrium in the level of Gross Output is offset by amendments in the short-run annually. The associated F-Statistic value of 232.5053 is statistically substantial at 5% level of significance, which confirms a good line of fit. Substantial bi-causality exists between Treasury bills and Aggregate Bank Credits and Gross Domestic Product. While a positive/growing insubstantial unidirectional causality flows from Commercial papers to Gross Domestic Product. Also, a substantial causality flows from Gross Domestic Product to Commercial Papers to demostrate that as the economy grows, shareholders and financiers increase the amount of investment interaction and participation in the financial market as well as Deposit Money Banks Credits to the private sector increases tremendously leading to financial development.
In the light of these issues raised above, it is recommended that:

(a)   Deposit Money Banks should surge credits facilities towards businesses in the nation at rates determined by the market forces as it possessespositive/growing potential in fostering the performance of the economy.

(b)   Public Authorities should specifically source funds from the Money Market towards meet its short term developmental needs and capital needs to foster performance of the nation.

(c)   Money Market institutions should capitalize on the investment activities available in the developing economy of Nigeria by giving accolade to innovative financial products to fund users for higher returns.

(d)   There should be increased public enlightenment on potential investments in Treasury bills as it tends to be very stable and therefore provides a dependable source of short term financing for the growth of Nigerian economy.

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