Monetary Policy Regimes and Stock Market Efficiency in Nigeria (2009-2019)

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Abstract: In attempt to examine the relationship between monetary policy and stock market efficiency, two proximate monetary policy regimes were chosen for the study - Sanusi's administration (2009-2014) and Emefiele's administration (2015-2019). Employing the multiple regression (OLS) technique reveals that money supply, interest rate, and monetary policy rate, all exert positive and marginal influence on market capitalization under Emefiele's administration (2015 - 2019), however, under Sanusi's administration (2009-2014), MS and INT exert significant influence on MCAP, with INT and MPR showing negative relationships, all complying with the a priori expectations. Also, considering the coefficients of determination, 99.9% and 83.0% respectively under Sanusi's and Emefiele's regimes, the study therefore conclude that monetary policy instruments under Sanusi's administration were efficiently managed enough to propel the efficiency of the stock market than that of Emefiele's administration. The study shows that the government through the monetary authorities should be cautious enough to avoid discretionary policies that might hike the rate of interest; as monetary policy rate through the interest rate channel has a negative relationship with stock market prices. Also, the place of consulting predecessors in policy-making is important especially where macroeconomic growth is conceived as the overall goal to be delivered.

1. Introduction

Growth is a common desire for every economy. While the developed economies make effort to sustain their attained economic growth, the developing economies struggle to attain theirs. To achieve this nominated objective, the stock market stands pivotal to spur economic growth by its activities of capital mobilization and allocation (Nwokoye & Emmanuel, 2018). Therefore, the accelerating importance of stock market around the world has invoke the belief that finance is an important ingredient of economic growth as well as development (Nowbutsing & Odit, 2009). A developed stock market or exchange creates centre for a network of transactions pulling securities buyers to meet sellers at a certain price (Jonathan & Oghenebrume, 2017); offers a lower cost of equity capital for companies and permit individuals to successfully price and hedge risk (Aduda et al., 2012); promotes sustainable economic growth, while poorly performing financial markets is one reason why many countries in the world remain desperately poor (Nwokoye & Emmanuel, 2018).

Monetary policy conceived as a mixture of deliberated systems to regulate the cost, supply, value of the stock of money in an economy, in line with the estimated economic activity level (Anowor & Okorie, 2016), when efficiently managed, stands to yield low and stable inflation which is believed to promote transactions in the stock market. However, a poor monetary policies with attendant high and volatile inflationary occurrences distort the allocation of productive resources, thereby hampering economic growth in the long term (Twinoburyo & Odhiambo, 2018). This serves as one of the core function displayed by the Central Bank of Nigeria (CBN) aimed at achieving price stability, equilibrium, rapid economic growth, full-employment, and external balance (Fasanya et al., 2013). This prominent task of the CBN is achieved through the administration of various monetary policy instruments which include: money supply, interest rate, exchange rate, cash reserve ratio, etc. Therefore, efficient blending of these monetary policy instruments in line with preconceived nominated economic objectives whether to contrast or expand the circulation of money spurs activities of stock market in the country.

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1.1 Statement of Problem

The relationship between monetary policy and stock market has been a global concern to economies and researchers since the breakdown of great stock market boom in 2000 and 2007 (Ali, & Ahmad, 2014), where collapse of major businesses, retardation in economic activities and decrease in consumer wealth were recorded (Nwokoye & Emmanuel, 2018).

Nigerian stock market experience was not left out in the shock considering its trend under various Central Bank of Nigeria monetary policy regimes. For instance, market capitalization growth rate fell from 0.57% to 0.37% in 2000 and 2005 respectively, then adjusted a little in 2010 by 0.41%, however, it experienced great decline in 2015 and 2018 by 0.01% and 0.04% respectively (CBN Bulletin, 2018).

It is premised on this ground, aroused the interest to investigate the nature of influence various CBN monetary policy regimes have on the operations of stock market operations in Nigeria, specifically from 2009 to 2019, a period of two CBN monetary policy regimes headed by Mallam Sanusi Lamido Sanusi (2009 to 2014) and Mr Godwin Emefiele (2015 to 2019).Therefore, the motivating objectives of this study are to:

i) Examine the nature of relationship that prevails between money supply and market capitalization in Nigeria.
ii) Investigate the influence of CBN interest rate on market capitalization in Nigeria.
iii) Evaluate the nature of relationship that prevails between monetary policy rate and market capitalization in Nigeria.

The rest of the study is structured as follows: Section two reviews the literature relating to CBN monetary policy and stock market. Section three presents the methodology and model specification. Section four discusses the empirical results while section five presents the concluding remarks and recommendations.

2. Conceptual Framework

Plethora definitions of monetary policy reveal that determined set of instruments are employed by monetary authorities on the quantum of money in circulation in order to achieve desire economic objectives at a given period. The Wikipedia encyclopedia (2015) defines monetary policy as the process by which the monetary authority of a country controls the supply of money, often targeting an inflation rate or interest rate to ensure price stability and general trust in the currency. Monetary policy is also defined as deliberate action by the monetary authorities to influence the quantity and cost

of the currency in order to achieve desired objectives that guarantee the maintenance of macroeconomic equilibria (Antonio, 2019).

Table 1: Notes used by CBN to determine economic operations in the country

Monetary Policy Instruments	Operational Goals	Intermediate Goals	Objective
Money Supply	Expansionary/ Tightening activities	>Domestic demand and supply	>Inflation control >GDP growth
Exchange Rate	Interbank rate	>Net external demand and supply	>Balance of Payment >Price stability
Interest Rate	Lending rate	>Asset pricing	>Stability of price and financial market
Cash Reserve Ratio	Short term interest rate	>Short and long term interest rate	>Employment
Monetary Policy Rate	Interbank call rates	>Short and long term interest rate	>Stability of price and financial market
Open Market Operation	>Treasury Bill >Liquidity Ratio	>Interest rate	>Stability of price and financial market
Discount Window Operations	Monetary Base	>M1, M2	>GDP growth
Currency Swap	Bilateral exchange	>Avoidance of 3rd Party Pressure on Exchange	>Price stability >GDP growth

Source: Adapted from Antonio (2019)

It is worth mentioning that the monetary policy rate (MPR) is the official interest rate of the CBN, which is the major determinant of prevailing interest rates in the economy (Edirin & Ekwueme, 2015). Accordingly, CBN decisions on the MPR certainly affect the level of economic activities and also prices of goods and services in the country. However, this policy was amended in 1989, when according to Onwumere et al (2012); Siyanbola et al (2012), the CBN issued further directives on the required spreads between deposit and lending rates in the country.

Besides, CBN (2006) upheld that in 1993, the maximum lending rate ceiling was removed. As a result, interest rates in the country increased to an unprecedented level, in relation to the trend of inflation rates that was prevailing in the country as at then (Akingunola et al., 2012). Thus MPR rose from 6% to 6.3% in 2009 and 2010 respectively, then rapidly increased to 12% held from 2011 to 2013 and in 2014 increased to 13%. This skyrocket situation of MPR was not friendly even from 2016 to 2018 where MPR stood at 14%. This scenario has been an incessant experience that pose threats to investors, thereby exerting negative impact on investments in the productive sectors of the economy, while volatile inter-bank rates undermined the efficacy of open market operations and general stability in the financial system.

However, Onyema (2019) posit that Nigerian economy continued its moderate path of recovery, growing by 1.81% year-on-year (YOY) in real terms as at Q3 2018. The recovery was aided by improved stability in the macro environment as the CBN continued to pursue a relatively tight monetary policy stance in an effort to curtail inflation1, holding the monetary policy rate steady at 14.00%; effectively maintained liquidity and stability in the foreign exchange market during the year.

2.1 Overview of Nigerian Stock Market

A stock market is a private or public market for the trading of company stock and derivatives of company stock at an agreed price (Jonathan & Oghenebrume, 2017). These are securities listed on a stock exchange as well as those only traded privately. In other words, a stock market or exchange is the centre of a network of transactions where securities buyers meet sellers at a certain price. To provide investors and businesses a reliable, efficient and an adaptable exchange hub in Africa, to save and to access capital has being the mission of Nigerian stock exchange (The Nigerian Stock Exchange, 2018). This has encouraged the Nigerian Stock Exchange to harness its resources (intellectual capital, financial capital, social capital and brand equity) through strategic themes that focus on operational efficiency, customer centricity, innovation and partnership (The Nigerian Stock Exchange, 2018).

An analysis of the NSE fixed income market, reveals that market capitalization increased by 11.76% to N10.17Tn from N9.10Tn in 2017. Turnover also increased by 22.34% compared to 2017 driven by a search for an alternative asset class opposed to equities. Capital raising was dominated by the Federal Government of Nigeria (FGN) who borrowed N1.16Tn in a bid to finance fiscal and infrastructure deficits; inclusive of the maiden N100Bn FGN Ijarah Sukuk designed to finance critical road infrastructure across the country. State Governments raised N125.59Bn in new debt capital, while corporates raised a total of N31.47Bn (The Nigerian Stock Exchange, 2018).

More so, foreign portfolio investments outpaced domestic participation by 1.74 percentage points, accounting for 50.87% of total transactions, while domestic transactions accounted for 49.13% — Retail (44%), Institutional (56%) (Onyema, 2019). The market also witnessed a 50.53% increase in foreign outflows from a total of N402.26Bn to N605.54Bn in 2018. This trend highlights attenuated foreign participation due to a shift to higher yielding assets with lower risks in developed countries.Amidst challenges, the market has offerred remarkable prospect that raises investors' and dealers' hope by its 2018-2021 strategy, where customers were promised prime attention in addition leverage on emerging technologies such as big data analytics, blockchain technology, etc. to capitalize on ' big bang' opportunities (The Nigerian Stock Exchange, 2018).

2.2 Theoretical Framework

2.2.1 The Keynesian Theory

Nwoko et al (2016) posit that the Keynesian theory did not buy the notion that the relationship between money and price is direct and proportional. They share the view that it is indirect through the rate of interest. Also they reject the notion that the economy is always at or near the natural level of real GDP so that Y in the equation of exchange can be regarded as fixed. They also reject the proposition that the velocity of circulation of money is constant (Nwoko, et al, 2016). From the Keynesian mechanism, monetary policy works by influencing interest rate which influences investment decisions and consequently, output and income and the multiples process (Screpanti & Zamagni, 2005).

In the Keynesian theory, monetary policy plays a crucial role in affecting economic activity, it contends that the change in the supply of money can permanently change such variables as the rate of interest, the aggregate demand and the level of employment, output and income (Jelilov et al, 2016b). Keynes believe in the existence of unemployment equilibrium, this implies that an increase in money supply can bring about permanent increases in the level of output and as well the ultimate influence of money supply on the price level depends upon its influence on aggregate demand and the elasticity of the supply of aggregate output (Jhingan, 2010).

2.2.2 Classical Monetary Theory

Proponents of the classical model which include: Jean Baptist Say, Adam Smith, David Richardo Pigu with common beliefs, attempt to explain the determination, savings and investment with respect to money (Onyiewu, 2013). In the classical system, the main function of money is to act as medium of exchange, it determined the general level of prices in which goods and services will be exchanged (Jelilov et al., 2016). This relationship between money and the price level is explained in terms of the quantity theory of money (Jelilov et al., 2015). The classical quantity theory of

money states that the price level is a function of the supply of money, where: MV=PT where M, V, P, and T are the supply of money, velocity of money, price level and the volume of transactions (Jhingan, 2010). The classical economists believe that the economy automatically tends towards full employment level by laying emphasis on price level and on how best to eliminate inflation (Screpanti & Zamagni, 2005).

2.2.3 Modern Approach
The modern economist reject the Keynesian view that link between the supply of money and output at the rate of interest, this theory considered only two types of assets; bonds and speculative cash balances, and the allocation depended on the rate of interest which in turn resulted in changes in output (Jhingan, 2010). This theory is a restatement of the quantity theory in the modern terms, this theory view velocity of circulation as a stable function of a limited number of key variables, the velocity bears a stable and predictable relationship to a limited number of other variables, and determines how much money people will hold rather than motive for holding more and sees money as the main type of asset which yields a flow of services to its holders, according to the functions it performs (Friedman 1956).

2.2.4 The Quantity Theory
The quantity theory was first developed by Irving Fisher in the inter-war years, and is a basic theoretical explanation for the link between money and the general price level (Geoffrey, 2012). Irving Fisher, in his quantity theory of money, opine that like other classical writers the short-run monetary control was dictated by interest rates which were sticky but in the long-run the demand of influence was real cash balance. Fisher further assumed that the rise in commodity prices would precedes the increased in interest rate which was regarded as main channel of the firms operation cost (Jelilov et al 2016).

2.2.5 Efficient Market Hypothesis (EMH)
The efficient Market Hypothesis (EMH) which was developed by Fama (1965) is an academic concept which provides a framework for examining the efficiency of the stock market. The theory states that an efficient market is one in which security prices adjust rapidly to the infusion of new information and that current stock prices fully reflect all relevant and available information about the affected security at any given time (Gbarato et al., 2020). Fama classified the efficient market hypothesis into the weak –form, semi-strong form and strong-form market efficiency, each depending on the nature of information available to each participant test of efficiency.

The weak-form of market efficiency postulates that current stock prices fully reflect all information implied by its historical sequences of prices, such that investors cannot use the knowledge of historical pricing trends to predict future price of the asset nor consistently beat the market to earn superior high return or profit. The semi-strong form of market efficiency proposes that current stock prices correctly reflect all publicly available information about the firm issuing the security, implying that no investor can use fundamental analysis of the securities to earn abnormal profit or above average returns in the market. The strong-form of market efficiency theorizes that current stock prices reflect all publicly and private information about the securities such that those who have access to privileged information or what might be considered insider information cannot use such information to earn superior returns or high profit in the market (Gbarato et al., 2020).

2.3 Empirical Review
Stock market performance is strongly determined by broad money supply, exchange rates and consumer price index in the short and long-run. Hence, the liquidity, exchange rate and price level channel of monetary policy transmission is supported by evidence as determinants of stock price movements in Nigeria. However, minimum rediscount rate and treasury bill rates show nominal relationship to changes in stock market index, although, comply with a priori expectations. The study used Nigeria quarterly data for twenty four years (1984:1 – 2007:4), employing ordinary least

squares; co-integration and error-correction specification. Therefore, the study recommended an individual interest rate channel of monetary policy transmission to effect changes in stock market index through minimum rediscount rate or treasury bills rate at a time.

Evaluating the interest rates regime in Nigeria as it affects the performance of the Nigerian Capital Market (1981 - 2013), Edirin and Ekwueme (2015) using Ordinary Least Square (OLS) technique, show that among others that changes in interest rate regimes have majorly influenced the level of the performance of the Nigerian Capital Market. The study recommended that capital market regulators and other regulatory agencies should keep an eye on movements in interest rates and the Minimum Rediscount Rate (MRR) (now MPR) as well as instituting reassessment mechanism necessary to assess the impact of selected policy measures on the economy for efficient policy-making.

In quest to investigate the nexus between monetary policy and stock market prices in Nigeria (1985 – 2015), Jonathan and Oghenebrume (2017) employed Dynamic and Fully Modified Ordinary Least Squares (DOLS & FMOLS), and Error Correction Model (ECM) techniques for the analysis. They found out that monetary policy rate, credit to private sector, exchange rate and broad money supply are positively related to stock market prices captured by the all share index in either the DOLS or FMOLS frameworks. Exchange rate and broad money supply were found to have statistically significantly impact on stock market prices. The estimated ECM equations showed that the short-run determinants of stock prices are largely from credit to private sector, one period lagged exchange rate; while monetary policy rate and broad money supply have a negative relationship with stock market prices in the short-run. The study recommended modification in exchange rate policy, and mobilize surplus funds from abroad, which would be injected into the capital market for significant development.

Nwokoye and Emmanuel (2018) also investigated the impact of monetary policy on the development of the stock market in Nigeria (1981 - 2015). Employing the error correction modelling (ECM), the results indicated that monetary policy, through the growth rate of money supply has impacted positively and significantly on the development of the stock market in Nigeria. Also, findings showed that prime lending rate has had a negative impact on the development of the stock market in Nigeria. The study recommended that the Central Bank of Nigeria should use its growth rate of money supply to further boost the development of the stock market but must however be mindful of the channeling of the increase in money supply in order to curtail the possible negative impact of inflation.

The extant accessed literature reveal mixed results. While Osuagwu (2009) observed that stock market performance is strongly determined by broad money supply, exchange rates and consumer price index in the short and long-run, major influence on stock market was attributed to: changes in monetary policy rate (Edirin & Ekwueme, 2015); Exchange rate and broad money supply (Jonathan & Oghenebrume, 2017). In the long run, monetary policy rate, credit to private sector, exchange rate and broad money supply were found to positively related to stock market (Nwokoye & Emmanuel, 2018; Jonathan & Oghenebrume, 2017) howbeit, in the long run, monetary policy rate and broad money supply have a negative relationship with stock market operation (Nwokoye & Emmanuel, 2018).

Although, these studies were Nigerian based, their studies cut across various CBN monetary policy regimes which makes it difficult to identify any regime with deficiency, therefore, creating a gap in study which this study attempts to fill. It is in this light that this study, aroused the interest to investigate the nature of influence various CBN monetary policy regimes have on the operations of stock market operations in Nigeria, specifically from 2009 to 2019, a period of two CBN monetary policy regimes headed by Mallam Sanusi Lamido Sanusi (2009 to 2014) and Mr Godwin Emefiele (2015 to 2019) making this study a comparative event study.

3. Materials and Methodology

This study employed time series data from Central Bank of Nigeria statistical bulletin (CBN, 2019). The study is an event-centered study with interest on two CBN monetary policy regimes, precisely, 2009 to 2014 and 2015 to 2019 under the administrations of Mallam Sanusi Lamido Sanusi and Mr. Godwin Emefiele respectively as governors of Central bank Nigeria within the study period of accessed data. In this study the Market Capitalization is used to measure the Stock Market Efficiency. On the other hand, monetary policy rate, interest rate and money supply are used as proxies to CBN monetary policy for the various regimes under consideration. In order to accomplish the objective of this study, the multiple regression least square was employed to determine the influence of CBN monetary policy on stock market efficiency under the various regimes highlighted. The choice of the statistical tools is because its features of being the 'Best Linear Unbiased Estimator' (BLUE), and versatility to econometric modeling and addresses the issue of integrating short-run dynamic estimation. The model for estimation in this study is an augmented version of Edirim and Ekwueme (2015) on the relationship between monetary policy regime and stock market efficiency. The relationship is implicitly stated as-

$$MCAP = f\ (MS, INTR, MPR) \qquad (1)$$

Where;
MCAP = Market Capitalization
MS = Money Supply
INTR = Interest Rate
MPR = Monetary Policy Rate
The linear form of the above is given as

$$MCAP = \alpha_0 + \alpha_1 MS + \alpha_2 INTR + \alpha_3 MPR + \varepsilon \qquad (2)$$

Where;
α_0 = Regression constant
$\alpha_1 - \alpha_3$ = Regression coefficients
ε = Stochastic error term
$\alpha_1 > 0$, α_2, $\alpha_3 < 0$.

4. Results and discussions

Results estimating the relationship between CBN monetary policy and stock market efficiency are hereby shown under the two monetary policy regimes – 'A' (2009-2014) and 'B' (2015-2019)

Table 2: Growth Rate of Money Supply (MS), Interest Rate (INT), Monetary Policy Rate (MPR) and Market Capitalisation (MCAP) in Nigeria for the period 2009 to 2019

Year	MS	Growth Rate	INT	Growth Rate	MPR	Growth Rate	MCAP	Growth Rate
	N' B	%	%	%	%	%	N' B	%
Regime 'A' (2009 - 2014) Under Sanusi's Administration								
2008	9166.84		11.84		9.75		9562.97	
2009	10780.63	0.18	12.63	0.07	12.85	0.32	7,030.84	-0.26
2010	11525.53	0.07	7.19	-0.43	5.67	-0.56	9,918.21	0.41
2011	13303.49	0.15	6.30	-0.12	4.70	-0.17	10,275.34	0.04
2012	15480.85	0.16	7.63	0.21	7.18	0.53	14,800.94	0.44
2013	15681.26	0.01	6.72	-0.12	5.54	-0.23	19,077.42	0.29
2014	18885.5	0.20	9.89	0.47	9.16	0.65	16,875.10	-0.12
Regime 'B' (2015 - 2019) Under Emefiele's Administration								
2015	20029.83	0.06	8.26	-0.16	8.68	-0.05	17,003.39	0.01
2016	23591.73	0.18	5.46	-0.34	6.22	-0.28	16,185.73	-0.05
2017	24140.63	0.02	7.73	0.42	10.88	0.75	21,128.90	0.31
2018	27068.53	0.12	8.85	0.14	10.31	-0.05	21,904.04	0.04
2019	29137.8	0.08	8.46	-0.04	10.71	0.04	25,890.22	0.18

Source: Authors' Computation from CBN Statistical Bulletin Data (2009 – 2019).

Table 2, reveals of money supply, the averages of its growth rate (0.18, 0.07, 0.15, 0.16, 0.01, 0.20 for regime 'A'; and 0.06, 0.18, 0.02, 0.12, 0.08 for regime 'B') within the periods are 0.027 and 0.005 for Sanusi's and Emefiele's administrations respectively. This suggest that growth level of money supply to the economy was better in Sanusi's administration than Emefiele's.

Consequently, a better performance is observed in Market Capitalisation on the average of growth in Sanusi's administration than Emefiele's administration. This is seen as its growth rates of -0.26, 0.41, 0.04, 0.44, 0.29, -0.12 for regime 'A' with an average of 0.073 which is greater than 0.061 of regime 'B' with growth rates of 0.01, -0.05, 0.31, 0.04, 0.18 for the respective periods.

Interest rate (INT) and Monetary Policy Rate (MPR) show their average growth rates to be 0.035 and 0.104 for INT, respectively in both regimes and 0.088 and 0.187 for MPR, respectively in both regimes. As expected of lower rates to attract more investment through greater access to finance, Sanusi's administration portrays such lower rates both in INR and MPR than Emefiele's administration as revealed by their growth rate averages.

A careful look at the MCAP growth rate suggests that perhaps, if the Sanusi led administration had continued to 2019, much operations worth more than N26 billions of naira would have taken place in the stock market than that of Emefiele's regime, ceteris paribus.

4.1 CBN Monetary Policy and Stock Market Efficiency Relationship

4.1.1 Regime 'A' (2009-2014) Under Sanusi's Administration
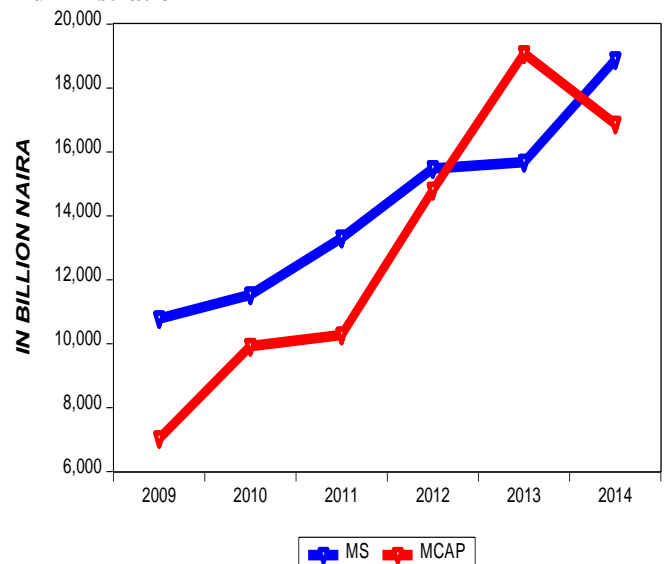

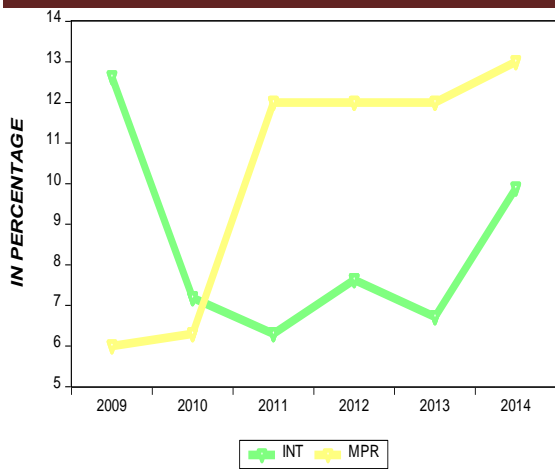**Fig.1(a)**
Source: Extract from Eview 10 Output

Fig.1(b)

Fig.1: Trend of employed CBN monetary policy instruments (money supply, interest rate, and monetary policy rate) in Nigeria for the period 2009 to 2014.

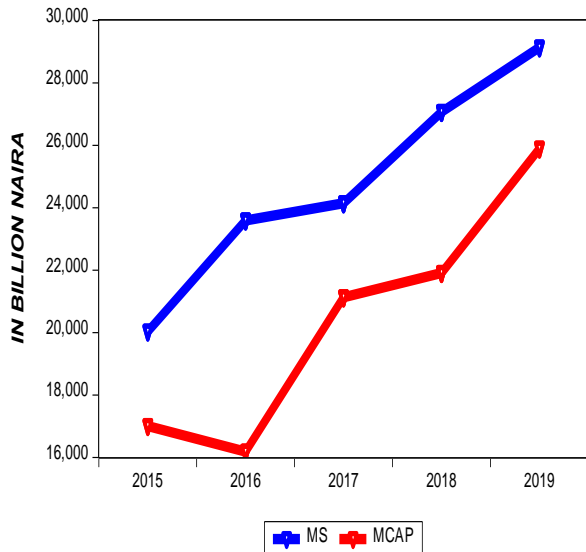### 4.1.2 Regime 'B' (2015-2019) Under Emefiele's Administration
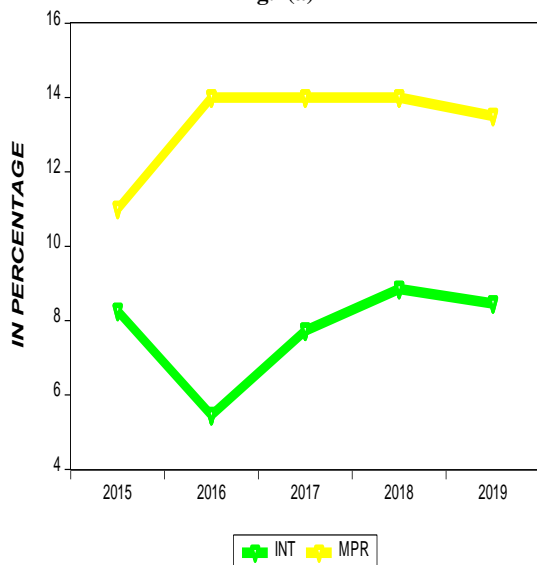

Fig.2(a)

Fig.2(b)

Fig. 2: Trend of employed CBN monetary policy instruments (money supply, interest rate, and monetary policy rate) in Nigeria for the period 2015 to 2019.

Figures 1 and 2 showcase the graphical trends of employed instruments of monetary policy as well as market capitalization in Nigeria for the periods 2009-2014 and 2015 to 2019 for Sanusi's and Emefiele's administration respectively. As observed, market capitalization (MCAP) and money supply (MS) within the periods experienced irregular graphical movement. MCAP portrays a parallel movement with MS to the level of 26 billion naira in 2019 under Emefiele's administration, however, under Sanusi's administration, MCAP rapidly intercept with MS in 2012 to the level of 19 billion naira in 2013 before its fall to 16 billion naira in 2014. This insinuates presence of rapid stock market growth in the former administration than the later.

Interest Rates (INT) and Monetary Policy Rates (MPR) movements in both regimes portray irregular trends, nevertheless, that of Emefiele's administration appear more co-ordinated and controlled than that of Sanusi's administration as MPR and INT fall below 14% and 9% respectively as at 2019 unlike its counterpart. This is an indication that INT and MPR as monetary policy tools, are well managed Emefiele's administration.

4.2 Multiple Regression (OLS) Results

In order to appreciate the short-run empirical relationship amongst the selected variables, the Ordinary Least Square (OLS) technique is employed on the model under the two CBN monetary policy regimes in the study. The data were transformed to enhance the quality of the data, thereby producing a dependable prediction of the relationship

Table 3: Multiple Regression (OLS) Result for Regime 'A' (2009-2014) Under Sanusi's Administration

Dependent Variable: LNMCAP			
Variable	Coefficient	Std Error	t-Statistic	Prob
C	-9.830637	0.702824	-13.98734	0.0454
LNMS	2.119737	0.080364	26.37668	0.0241
INTR	-0.058870	0.003473	-16.95128	0.0375
MPR	-0.048867	0.005780	-8.454463	0.0750
R^2= 0.999673	F-stat= 763.2655	Prob= 0.027140	DW stat= 2.348780	

Source: Extract from Eview 10 Output

Table 4: Multiple Regression (OLS) Result for Regime 'B' (2015-2019) Under Emefiele's Administration

Dependent Variable: LNMCAP			
Variable	Coefficient	Std Error	t-Statistic	Prob
C	39243205	19516376	2.010783	0.2938
LNMS	0.405170	1.176196	0.344475	0.7888
INTR	976.1839	915.8553	1.065871	0.4797
MPR	212.4098	1598.635	0.132869	0.9159
R^2= 0.830040	F-stat= 2.637368	Prob= 0.000385	DW stat= 2.005156	

Source: Extract from Eview 10 Output

A priori expectations are that Money Supply (MS) should exert positive influence on Market Capitalization (MCAP) while Interest Rate (INTR) and Monetary Policy Rate (MPR) should exert negative influence on MCAP. From, the multiple regression Least Square results shown in Table 3 and table 4, coefficients of determination (R^2) for the models are 0.999673 and 0.830040 for Regime 'A' and 'B' respectively, indicating the strength of the independent variable to explain changes/variations that take place in market capitalization. It implies that, MS, INTR and MPR explain or account for 99.9 percent of variation in MCAP under Regime 'A', and 83.0 percent of variation in MCAP under Regime 'B' in Nigeria within the periods of study. In other words, about 0.1 percent and 17 percent of variations in the dependent variable in Regime 'A' and 'B' respectively are caused by other factors not included in the model.

The robustness of this results is further buttressed by an F-statistic of 763.2655 and 2.637368 for the respective regimes, while the Durbin-Watson statistic of 2.348780 and 2.005156 for model 1 and 2 respectively clearly indicate that there is no effect of serial correlation among the variables used in the study. With the Probabilities of F-statistic of 0.027140 and 0.000385 for the respective models, which signifies that the model has performed well.

From the results, employed monetary policy instruments (money supply, interest rate, and monetary policy rate) all exert positive and marginal effect on market capitalization under Emefiele's policy regime, indicating that activities of CBN in terms of its monetary policy operations did not greatly influence the efficiency of the stock market. On the other hand, MS and INT exert significant influence on MCAP, with INT and MPR showing negative relationships.

However, it is worthy of note, that while the monetary policy instruments under regime 'A' (2009-2014) all complied with a priori expectations, that of regime 'B' (2015-2019) did not, with exception to money supply. This is a clear indication that monetary policy tools employed under Sanusi's administration did not only favour but also significantly influence economic activities in the stock exchange, thereby improving the status quo of stock market operations in the economy than as applicable to its counterpart.

Also, juxtaposing the coefficient of determination under both regimes, only 0.1 percent variations in market capitalization was caused by other variables under Regime 'A' whereas 17 percent of variations in the market capitalization under regime 'B' was caused by other factors not included in the model. We can insinuate that CBN monetary policy for the period 2009 to 2014 was efficient enough to enhance the activities and operations in the Nigerian stock market more than CBN monetary policy regime for the period 2015 to 2019. Edirin and Ekwueme (2015) argue that movement of market capitalization in the economy is a function of policy measures taken by the regulatory bodies in Nigeria. With a cursory look on present economic activities, this attest to changes in price instability, loss of investors' confidence in stock exchange, fluctuations in industrial activities which has led to increase in unemployment rate as well as poverty level in the economy within the period of 2015 to 2019.

5. Conclusions

It is witnessed from the study that monetary policy administration was efficient and favourable to stock market operations under Sanusi's administration than that of Emefiele. Also, considering the coefficients of determination, 99.9% and 83.0% respectively under both regimes, the study therefore conclude that CBN monetary policy instruments under Sanusi's administration were efficiently managed enough to propel the efficiency of the stock market than that of Emefiele's administration.

Sequel to the aforementioned findings, the study recommends amongst others, that: government through the monetary authorities should be cautious enough to avoid discretionary policies that might hike the rate of interest; as monetary policy rate through the interest rate channel has a negative relationship with stock market prices. Also, the place of consulting predecessors in policy-making is important especially where macroeconomic growth is conceived as the overall goal to be delivered.

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