Bamidele Muzliu ILO[1]
Yusuf Aina SOYEBO[2]
Olusola Enitan OLOWOFELA[3]

MONETARY POLICY AND SMALL AND MEDIUM ENTERPRISES (SMEs) PERFORMANCE IN NIGERIA

The Small and Medium Enterprises (SMEs) have been known to play significant roles in promoting economic growth, employment generation and foreign exchange earnings among others, of both developed and developing economies. Monetary policy, on the other hand, includes actions and strategies employed by a central bank or monetary authority to control and regulate the money supply, interest rates, and credit conditions in an economy. This study therefore, examines how monetary policy affects the performance of SMEs in Nigeria based on the data covering the period from 1981–2020 using the Autoregressive Distributed Lag Model (ARDL). ARDL captures both long-run equilibrium relationships and short-term dynamics, allowing researchers to examine the interplay between variables over time. The study found that monetary policy has not been a potent tool for promoting the performance SMEs in Nigeria.

Keywords: Autoregressive Distributed Lag Model (ARDL), credit to SMEs, money supply, monetary policy, Small and Medium Scale Enterprises (SMEs).

1. INTRODUCTION

The report of World Bank (2022) estimated that 600 million jobs will be needed by year 2030 in order to absorb the growing global workforce, this makes SME development a high priority for many governments around the world. Generally, small and medium-sized enterprises (SMEs) play important roles due to its ability to contributing to economic output and employment generation vis a vis in the global economy due to the fact that SMEs are the most common types of businesses worldwide as they represent 90% of businesses and also contribute more than 50% of global employment opportunities. In emerging economies, registered SMEs contribute up to 40% of national income (GDP). However, these numbers are considerably higher when informal SMEs are included. In

---

[1] Bamidele Muzliu ILO, Olabisi Onabanjo University, Nigeria, e-mail: ilo.bamidele@oouagoiwoye.edu.ng, ORCID: 0000-0001-6030-6018.

[2] Yusuf Aina SOYEBO, Lagos State University, Nigeria, e-mail: yusuf.soyebo@lasu.edu.ng, ORCID: 0000-0003-4067-6681.

[3] Olusola Enitan OLOWOFELA, Olabisi Onabanjo University, Nigeria; e-mail: olowofelaolusola@gmail.com (corresponding author), ORCID: 0000-0003-2611-7736.

addition, the study of PwC Nigeria in 2020 reported that the SME sector is the lubricant oil to the wheel of economy in developed economies, as well as significant contributor to employment, economic and export growth. In South Africa, SMEs account for 91% of businesses, 60% of employment and contribute 52% of total GDP. In Nigeria, SMEs contribute 48% of national GDP, or about $207.504 billion, account for 96% of businesses and 84% of employment. With a total number of about 17.4 million, they contribute 50% of industrial jobs and nearly 90% of the manufacturing sector, in terms of number of enterprises (PwC Nigeria, 2020).

In the case of Thailand Korwatanasaku and Paweenawa (2020) asserted that there were approximately 3 million companies considered SMEs, which accounted for 99.8% of the total number of companies, in 2018. Moreover, SMEs generate 14 million jobs, equal to 86% of the total employment. SMEs also contributed enormously to Thailand's gross domestic product (GDP) as they accounted for 45% of the national GDP, or around $215 billion. In emerging markets, most formal jobs are generated by SMEs, which create 7 out of 10 jobs. However, access to finance has been identified as key constraint to SME growth, it is the second most cited difficulty facing SMEs in emerging markets and developing countries (Sanni, Oke, Alayande, 2020).

Monetary policy are specific actions taken by the Central Bank on behalf of the government to control the supply, value and cost of money in the economy with in order to achieve macroeconomic objectives. Intently, objective of monetary policy varies in different countries. The first view objective of monetary policy is to achieve price stability, whereas the second view seeks to achieve price stability and other macroeconomic objectives. However, Central Bank of Nigeria (CBN), comparable to any other Central Banks in developing countries, accomplish the objective of monetary policy through the amount of money supplied or circulation (CBN, 2006). Therefore, this alludes to the critical role of money supply as a major tool of monetary policy actions.

NTO Philips, Mbanasor, Osuala (2012) asserted that apart from various forms interventions, the CBN had been constantly reviewing monetary policy instruments such as cash reserve ratio (CRR) and liquidity ratio (LR) in other to ensure accessibility of credit and likewise enhance liquidity in the banking system which will trickledown increase in accessibility of credit to SMEs and therefore, lessen the crippling effect on the crises in Nigerian economy. Surprisingly, monetary policy action has not been consistent in promoting expected economic growth. For instance Onyeiwu (2012) revealed that only money supply had positive and significant impact on economic growth whereas, other variables like liquidity and cash reserve ratio are insignificant and their direction of influence are variance to expectation.

There are various factors that enhanced economic output and growth including the monetary policy. The CBN reported that the Nigerian economy maintained its recovery path in 2019, as real output grew by 2.3 per cent, compared with 1.9 per cent in 2018. This was partly accredited to increased capital inflows, that helped to stabilize the foreign exchange market; improved lending to the real sector, based on CBN's directive to Deposit Money Banks (DMBs) to maintain a minimum Loan-to-Deposit Ratio (LDR) of 60.0 per cent in July 2019 and 65.0 per cent by end-2019; and persistent involvements in the real sector by the Federal Government.

SMEs are less likely to be eligible to obtain bank loans like the large firms; rather, they mostly depend more on internal funds, or cash from friends and family, to launch and initially manage their enterprises. In line with these, the International Finance Corporation (IFC) estimates that 65 million firms, or 40% of formal micro, small and medium

enterprises (MSMEs) in developing countries, were unable to meet their financial needs estimated of \$5.2 trillion every year, which is equivalent to 1.4 times the current level of the global MSME lending. The study of World bank, (2022) reported that East Asia and Pacific accounts for the largest share (46%) of the total global finance gap and is followed by Latin America and the Caribbean (23%) and Europe and Central Asia (15%). The gap volume varies considerably from region to region. Latin America and the Caribbean and the Middle East and North Africa regions, in particular, have the highest proportion of the finance gap compared to potential demand, measured at 87% and 88%, respectively (World Bank, 2022).

However, in Nigeria the CBN (2021) as reported by nairametrics.com (2021) was worried at ₦617.3 billion financing gap for MSMEs for each year noting that only about 5% of the enterprises have access to adequate finance that cover their working capital and expansion demands. Although the CBN has several interventions to address the paucity of funding in the SME subsector yet it still appears to be a drop in the ocean, meanwhile commercial bank lending to SMEs continue to deteriorate as a percentage of total lending from 7.58% to 0.14% and 0.32% in 2000, 2010 and 2020 respectively. All these are outcomes of the monetary policy. It then puts a question on the extent to which monetary policy has aided or affected the SME's in Nigeria.

Osinubi (2005) notes that one essential objective of monetary policy is to stabilize the economy, that is, it should manage the economy during recession and inflation period. However, this appears not to have been the case in Nigeria as indicated by available evidence. He confirmed the notion that monetary policy affects its ultimate target after a lag, which is both long and variable. It is therefore imperative that we really understand how the monetary policy affects the performance of SMEs in Nigeria. Against this background, this study addresses two research questions that highlight the relationship between SMEs and monetary policy in Nigeria. Firstly, how does the access to credit affect the performance of SMEs? Secondly, how does money supply affect SMEs output in Nigeria?

This paper is divided into five sections. Section 2, contains the literature review, and the methodology is presented in section 3. The results and discussion are featured in section 4 while section 5 concludes the study.

2. LITERATURE REVIEW

2.1. Theoretical Review

Monetary policy refers to the actions and strategies employed by a central bank or monetary authority to control and regulate the money supply, interest rates, and credit conditions in an economy. The primary goal of monetary policy is to achieve and maintain price stability, promote sustainable economic growth, and ensure the stability of the financial system. The Central Bank of Nigeria (CBN) is the federal government agency saddled with the obligation of making and implementing monetary policy in Nigeria. The Nigerian monetary policy is the set of tools adopted by the CBN to achieve its goals. The necessity to control money supply is based on the existing knowledge that there is a stable connection between the quantity of money supply and economic activity and that if its supply is not limited to what is required to support productive activities; it will result in undesirable effects such as high prices or inflation (CBN, 2006). This position derives from the quantity theory of money which posits that the general price level of good and services is directly proportional to the amount of money in circulation or money supply in an

economy. Although the Keynesians challenge this position arguing that economic policies targeted at influencing money supply should be the best way to address economic growth. Available evidence tends to support the idea that the practice in Nigeria appears to be on the monetarists' side.

The central bank uses money supply to control economic activities and credit creation by adjusting tools like the bank rate or discount rate, cash reserve requirement and liquidity ratio. If the central bank wishes to stimulate economic activities, it adjusts its various monetary policy tools in a direction that will enhance credit expansion capacity of commercial banks. It will for instance reduce its rediscount rate that is the rate at which it provides credit to banks (Monetary Policy Rate), lower liquidity ratio and cash reserve ratio if an expansionary policy is pursued and vice versa.

Monetarists hold the view that changes in the level of money supply have a direct influence aggregate expenditure and thus national income (Jhingan, 2010). Thus, the level of income can be influenced by adjusting the growth rate and level of money supply in the economy. The direction of such can be achieved through monetary policy tools such as cash reserve ratio, liquidity ratio, interest rate. The manifestation of these ratios depends on whether government intends to pursue an expansionary or contractionary monetary policy, such that increase in money supply tends to increase aggregate consumption and natural income and vice versa. Therefore, growth in money supply theoretically should increase the output of SME'S and their contribution to the national output.

The Keynesians, however have argued that monetary policy may not be effective in stimulating aggregate demands / expenditure because demand for money is high interest elastic, as a small fall in interest rate will induce people to sell securities (since it's price is now high under an expansionary policy) and hold more money. Hence according to Keynesians an expansionary policy is not successful in raising the aggregate expenditure and income much (Jhingan, 2010)

Jhingan (2010) noted that though monetarists have built their arguments on empirical findings but they are equally skeptical as to the efficiency their proposition. He argued that using, money supply as economic stabilizer, monetary policy may do more harm than good because of the operations lag. On the average it takes a long time for a change in the supply of money to affect national income. This position has been confirmed in Nigeria by Osinubi (2005) that monetary policy outcome exhibit a long lag and can mean that monetary policy does the opposite of what it is expected to do, that is, it may stimulate the economy when it is over heated and dampen it when it is recession, in effect making things worse rather than better.

According to Friedman (1968) popularized the monetary policy, Jhingan (2010) reported that Friedman, agrees that if the operations lag is long and countercyclical, monetary policy may in fact have a destabilizing effect on the economy. The monetarist therefore, hold that the economy itself is on a stable path in the long run, hence they advocate for an annual fixed percentage growth in the supply of money and an end to discretion in monetary policy.

As argued, the Keynesians do not deny that money matters but via changes in interest rate. They posit that that monetary policy will be ineffective during depression and advocate the use of fiscal policy. They observe that a combination of fiscal and monetary policy will be more effective in driving national income. Following the line of the Central Bank of Nigeria, this paper examines the role of monetary policy in promoting SMEs output in Nigeria in line with the quantity theory of money as advocated by the monetarists. Thus, we examine how money supply and credit to the SMEs sector influence the output and performance of that sector.

2.2. Empirical Review

Osinubi (2005) appraised the implications of lags in the effects of monetary policy in Nigeria using quarterly data covering the period 1986 to 1998. One important aim of monetary policy is that of stabilizing the economy, that is, it should stimulate the economy in recession and dampen it in periods of inflation. The existence of a long lag can mean that monetary policy does the opposite of what it is expected. The problem of lag is further made difficult by the fact that the lag can be variable meaning that it can be of uncertain length. It is in this respect that the study empirically evaluates the lags in the effect of monetary policy in Nigeria using monetary growth model of aggregate demand. The results of the study confirmed the notion that monetary policy affects its ultimate target after a lag, which is both long and variable. The existence of a long and variable lag suggests that government monetary policy should not attempt to be actively anti-cyclical but should behave in a manner that is cyclically neutral. Also, since monetary transmission mechanism plays a major role as far as the timing of monetary policy is concerned and so because of its important role, government should put in place more efficient financial structures to ensure that the transmission mechanisms is hitch free.

Okay (2010) examines the impact of monetary policy instruments on the economic development in Nigeria during the period 1980–2006. With the aid of the t-ratio, the study revealed that only two out of the six selected explanatory variables exert a significant impact on the level of economic development in Nigeria between the study periods (pre-and-post deregulation). The study therefore, concludes that with the insignificant nature of most of the variables, policy formulation and implementation inconsistencies appear to hinder the full impact of monetary policy on the economy and therefore, should be critically watched.

However, the outcome of the study by Okay (2010) tends to suggest that there might not have been much difference in the economic policy of Nigeria over the years as he could only find significant difference in the outcomes treasury bill and treasury certificates pre and post deregulation of monetary policy whereas, no significant difference was found in the case of money supply, certificate of deposit, commercial papers and bankers' certificate. This puts a question on the effectiveness of monetary policy in Nigeria.

NTO Philips, Mbanasor, and Osuala (2012) examined the influence of monetary policy variables on loan supply to SMEs in Nigeria using quarterly data from the Central Bank of Nigeria (CBN) Statistical Bulletin and financial statements for five commercial banks. The data covered the period of 1995–2010 and were analyzed using Fully Modified Least Squares (FMOLS). Following the above procedures, the dependent variable (credit supply to SMEs) was expressed as a function of cash reserve ratio; liquidity ratio, interest rate on deposit and lending rate of banks in Nigeria. The study found that interest rate on deposit and lending rate has negative and positive and significant influence respectively on amount of credit supplied to SMEs. However, cash reserve ratio and liquidity ratio have positive but insignificant influence on credit to the SME sector in Nigeria. Their study thus implies that deposit interest and lending rates are the principal drivers of lending to the SMEs with implications on their final output. The study noted that this finding is contrary to the result of Rahji and Apata (2012) who found that interest rate was positively and significantly related to credit supply to SMEs under the Small and Medium Enterprises Equity Investment Scheme in Nigeria.

Onyeiwu (2012) examines the impact of monetary policy on the Nigerian economy using the ordinary least squares method from 1981 to 2008. The result shows that monetary

policy represented by money supply exerts a positive and significant impact on GDP growth and balance of payment but negative impact on rate of inflation. The study thus, recommends that monetary policy should facilitate a favourable investment climate through appropriate interest rates, exchange rate and liquidity management mechanism and the money market should provide more financial instruments that satisfy the requirement of the ever-growing sophistication of operators.

Although the study reveals that while liquidity ratio, cash reserve ratio have negative and money supply has a positive impact on inflation, none of these variables is significant. This would imply that it may be futile relying on these instruments for curtailing rising price level in Nigeria.

Ayuba and Zubair (2015) examines the impact of banking sector credit on the growth of small and medium enterprises in Nigeria based on annual data between 1985 and 2010. The regression results show that credit to SMEs as a fraction of total loans has positive but insignificant impact on SME growth in Nigeria. Major macro-economic variables of growth such as inflation, exchange rate, were also not found to have had any significant impact on SME sector. Invariably, the volume of credit advanced to the SMEs sector over the years cannot be said to have been able to drive any significant growth in that sector of the Nigerian economy.

In their analysis of the role of monetary policy on Nigerian economy, Akinjare, Babajide, Isibor, and Okahon (2016) used Nigerian data from 1979 to 2013 and adopting the multiple linear regression technique based on the ordinary least squares. The study reveals that monetary policy variables of money supply, exchange rate and interest rate, except inflation have significant effect on economic development in Nigeria. In addition only exchange rate and inflation exert negative impart while the rest are positively related. Notwithstanding that the study was to evaluate the role of monetary policy on economic development, it advocates that money supply should be kept at a level consistent with economic development, and low interest rate should be charged on loans to SMEs in order to drive SMEs which will in turn reduce unemployment, crime and other social vices, thus pushing the economy to grow and develop.

Mjujahid, Begam and Nagis (2019) reports the submissions of various authors on the SMEs-growth nexus thus: (i) Carree, Van Stel, Thurik, and Wennekers (2002) confirmed direct and positive association between growth of the economy and entrepreneurial activities of SMEs. (ii) Somoye (2013) investigated the consequences of SMEs financing on the economic progress of Nigeria while using endogenous development system. The outcome is in favor of the argument that financial accessibility, real GDP, unemployment and industrial efficiency were acute factors to surge the growth of SMEs sector and (iii) Onakoya, Fasanya, and Abdulrahman (2013) observed the effect of finance availability on SMEs using quarterly series for the period of 1992–2009. The outcomes demonstrated performance of SMEs was subjected to the credit accessibility through operational loan facilities.

Sanni, Oke, and Alayande (2020) examines the effect of deposit money banks credit accessibility on SMEs performance in Kwara State, Nigeria. The population of the study consists of three hundred and eighty-two (382) respondents and one hundred and ninety-eight (198) were randomly selected as the sample size of the study. Data were drawn from the primary source to elicit responses from SME owners/managers. Descriptive statistics and Partial Least Squares – Structural Equation Model (PLS-SEM) estimation techniques were employed to analyse the data collected. The study revealed that deposit money banks credit accessibility has a positive significant effect on SME performance and credit related

charges (interest) also has a positive significant effect on SME performance. This implies that provision of finance by deposit money banks at relatively low cost plays an important role in boosting the performance of SMEs.

PwC Nigeria (2020) in one of its surveys provides insights into a range of issues concerning SMEs in Nigeria, and the challenges impacting business growth, particularly financing, taxation issues; and other factors - through the eyes of their CEO's. The survey reported that while the SMEs sector has witnessed significant growth it still faces a lot of challenges hindering the growth and development of the sector. Such hinderances have been attributed to challenge associated with factors like unequal access to finance, lack of skilled manpower, multiplicity of taxes and high cost of doing business. It further reported that according to the Nigeria Bureau of Statistics, small and medium scale enterprises (SMEs) in Nigeria have contributed about 48% of the national GDP in the last five years. With a total number of about 17.4 million, they account for about 50% of industrial jobs and nearly 90% of the manufacturing sector, in terms of number of enterprises.

SMEs are therefore affected by the monetary policy environment however, the depth of the impact of monetary policy tool varies and likewise the direction of such influence. These inconsistencies in the role of monetary policy further necessitate the need to further examine the impact of monetary policy on performance of SMEs in Nigeria. Therefore, compared to previous authors review the uniqueness of this research lies in using a macroeconomic and econometric means to understand the influence short- and long-run lag of the variables using Auto Regressive and Distributed Lag (ARDL) It is an econometric model used for analyzing the long-run and short-run relationships between variables, particularly in the context of time series data. The ARDL model is designed to handle situations where the variables may have different orders of integration, such as when some variables are stationary (integrated of order zero) and others are non-stationary (integrated of order one or higher).

3. METHODOLOGY

The study adopted *ex post facto* research design sourcing secondary data from the Central Bank of Nigeria Statistical Bulletin from 1981-2020 covering a period of 40 years. The model is anchored on the quantity theory of money as postulated by the monetarist that the changes in the level of money supply and the level of money supply have direct influence on aggregate expenditure and national income. This has been operationalized by evaluating the output/ SMEs gross domestic product as a function of monetary policy variables. The study also employs the descriptive statistics to provide a better understanding of the behaviour of each of the variables at the level of univariate analysis using the mean, standard deviation, and coefficient of variation of the variables among others.

3.1. Model Specification

The research model is specified as follows:

$$MSE_{gdp=} \quad f(MS_t, CRsme, INT, INF)\qquad\qquad(1)$$

Equation 1 is specified as an econometric model to aid estimation and presented in equation 2 as follows:

$$MSE_{gdp} = \beta_0 +, \beta_1 CRsme + \beta_2 INT + \beta_3 MS_t + \beta_4 INF + \varepsilon \dots \qquad(2)$$

Where:

MSE_{gdp} – Output of SMEs in term of gross domestic product,

$CRsme$ – Bank credit to the SME sector,

INT – Interest rate on lending,

MS – Broad money supply (M2),

INF – Inflation rate,

A priori expectations – $\beta_1, \beta_3, \beta_4 > 0$ and $\beta_2 < 0$.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

The descriptive statistical analysis results are presented in Table 1 and explained subsequently.

Table 1. Descriptive Statistical Analysis (1981–2020)

	SME GDP (₦' billion)	CREDIT TO SME (₦' billion)	INTEREST RATE (%)	MONEY SUPPLY (₦' billion)	INFLATION RATE (%)
Mean	21,971.32	1,275.784	17.45425	7,321.040	18.97425
Median	4434.116	222.5300	17.53000	1073.890	12.55000
Maximum	93386.74	6296.290	29.80000	36014.88	72.84000
Minimum	64.19135	4.690000	7.750000	14.47000	5.380000
Std. Dev.	29139.16	1833.500	4.603288	10834.10	16.87954
Coefficient of Variation	1.3262	1.4372	0.2637	1.4799	0.8896
Skewness	1.167943	1.280569	0.237935	1.385651	1.823907
Kurtosis	3.022324	3.283685	3.618886	3.604644	5.157950
Jarque-Bera	9.094776	11.06651	1.015789	13.40951	29.93883
Probability	0.010595	0.003953	0.601761	0.001225	0.000000
Sum	878852.8	51031.37	698.1700	292841.6	758.9700
Sum Sq. Dev.	3.31E+10	1.31E+08	826.4200	4.58E+09	11111.84
Observations	40	40	40	40	40

Source: Authors' computations.

The descriptive statistical analysis results cover the data for the period between 1981 and 2020. It shows that the mean value of SME output (GDP) is ₦ 21,971.32billion per annum but the output has not been stable over the years as indicated by the high standard deviation of ₦29,139.16. This is better understood based of the coefficient of variation of 1.326 indicating the level of variability in the performance of SMEs lacking capacity to withstand vagaries of the economic environment. It also further provides an insight into the level of risk associated with small businesses due to factors like small size, low capital, unequal capacity to compete with large firms, limited access to resources, like capital, skilled and experienced manpower among others. This is an industry that needs special support given its pervasiveness in the Nigerian economic landscape yet struggling to

survive despite the strategic position its occupies in the Nigerian economy in terms of employment generation among others.

The average credit to the SMEs was ₦1,275.784 billion per annum during the period but highly unstable as indicated by the high coefficient of variation of 1.437. A similar pattern was observed in the case of money supply with average annual money supply of ₦7,231.040 billion and coefficient of variation of 1.480. These patterns are generally unsupportive of adequate planning given the high degree of variability in the key monetary policy variables like money supply and credit to SMEs.

The mean interest rate was 17.45% while inflation rate averaged 18.97% per annum although both have been relatively more stable than the other variables. It is, however, important to note that an average annual borrowing rate of 17.45% can be considered too high for SMEs given the high cost of doing business in Nigeria and worst still when they have to operate in an environment where prices increase at the rate of 18.97% per annum and exchange rate of Naira/US dollar has deteriorated abysmally over the years. For instance, the exchange rate of was N109.55/$1.0, N148.81/$1.0 and N307/$1.0 in 2000, 2010 and 2020 respectively. This implies a depreciation of the naira by 35.83% between 2000 and 2010 and 106.30 % between 2010 and 2020. By implication the naira has depreciated on the average by 10.63% per annum in the last one decade. This type of environment is obviously too inclement for the survival of an average SME in Nigeria which further explains the high level of variabilities in their aggregate gross domestic product output as earlier explained. For instance, Oladimeji, Sofoluwe and Oduanaya (2021) found that inflation, and exchange rate from 1985 to 2019 have negatively affected the growth of MSEs in Nigeria.

4.2. Test for Stationarity

As part of the initial diagnostic tests, we conducted the test for stationarity of the series to determine whether they contain unit root or otherwise. This is important in determining the most appropriate estimation technique in line with Granger and Newbold (1974) that series that are non-stationary series will generate spurious regression results if the ordinary least squares technique is adopted on them. This study thus, examines the nature of stationarity of each variable using the Augmented Dickey-Fuller (ADF) unit root test and the result is presented in Table 2. The ADF tests the null hypothesis that a series is I(1), that is, contains unit root(non-stationary) against the alternative that it does not(stationary). The null is thus accepted if the calculated t-statistics is less than the critical value, thus concluding that such a series contains unit root and it is not stationary.

Table 2. Augmented Dickey-Fuller (ADF) Unit Root Test

Variables	Level			First Difference			Stationarity
	Statistics	Prob.	Critical Value	Statistics	Prob.	Critical Value	
SME Performance	-1.5441	0.5011	-2.9389	-4.0279	0.0034	-2.9411	I(1)
Credit to SME	-0.5983	0.8595	-2.9389	-6.6742	0.0000	-2.9411	I(1)
Interest Rate	-3.4815	0.0139	-2.9389				I(0)
Money Supply	-0.9153	0.7728	-2.9389	-4.0120	0.0035	-2.9411	I(1)
Inflation Rate	-3.4466	0.0151	-2.9389				I(0)

Source: Authors' Computation (2022) Using E-views 10.

It reveals that interest rate, and inflation are stationary at the level I(0), as the t-values(absolute) are higher than the corresponding critical values. Contrarily, SME performance, credit to SME and money supply are integrated I(1) as obtained statistical values (t-value) are less than the corresponding critical values at the level. This implies that series like SME performance, credit to SME and money supply having unit root exhibit strong upward or downward movements over time with no tendency to revert to a fixed mean. This has implications on how such variables are modeled in making predictions.

Having established the unit root test, the mixed stationarity of the series compels the use of Autoregressive Distributive Lag (ARDL) Error Correction Regression in estimating the influence of the specified variables on SME performance in Nigeria. The Johansen cointegration test cannot be applied directly if variables of interest are of mixed order of integration or all of them are not non-stationary, as this method requires all the variables to be I (1) (Shrestha, Bhatta, 2018).

4.3. Regression Results

Shrestha & Bhatta (2018) posits that dynamic error correction model (ECM) can be derived from ARDL through a simple linear transformation. Likewise, the ECM integrates the short-run dynamics with the long-run equilibrium without losing long-run information and avoids problems such as spurious relationship resulting from non-stationary time series data. Relying on this, we present the long and short run dynamics of the influence of monetary policy on SME performance based on the ARDL estimation technique in Table 3 as specified in equation 2.

Table 3. ARDL Error Correction Regression

Dependent Variable: D(SME PERFORMANCE)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(SME PERFORMANCE(-1))	-0.1179	0.1931	-0.6106	0.5474
D(CREDIT TO SME)	-0.0257	0.0790	-0.3258	0.7475
D(CREDIT TO SME(-1))	0.0150	0.0962	0.1560	0.8774
D(INTEREST RATE)	0.2480**	0.0909	2.7272	0.0120
D(INTEREST RATE(-1))	0.0978	0.0808	1.2101	0.2385
D(MONEY SUPPLY)	0.0650	0.1843	0.3528	0.7274
D(MONEY SUPPLY(-1))	0.0705	0.2307	0.3058	0.7624
D(INFLATION RATE)	0.0860**	0.0331	2.5957	0.0162
D(INFLATION RATE(-1))	-0.0135	0.0287	-0.4717	0.6416
CointEq(-1)*	-0.0108*	0.0028	3.8662	0.0008
R-squared	0.6556	Mean dependent var		0.0830
Adjusted R-squared	0.5450	S.D. dependent var		0.0606
S.E. of regression	0.0409	Akaike info criterion		-3.3333
Sum squared resid	0.0468	Schwarz criterion		-2.9024
Log likelihood	73.3345	Hannan-Quinn criter.		-3.1800
Durbin-Watson stat	1.90337			

N.B : * ; ** significant at 1% and 5%

Source: Authors' Computation (2022) Using E-views 10.

The regression result reveals that the model speed of adjustment (ECM) value of -0.0108 is correctly signed and statistically significant at 95% confidence level. The variables such as interest rate and money supply exert positive influence on SME performance both in their current and one-year lag period. While contemporaneous inflation rate has positive and significant influence on SME performance, lagged inflation rate depletes the performance of SMEs though not significant. Current loan to SMEs has negative while its lagged value has positive but insignificant influence on SME performance. Meanwhile, Ayuba and Subair (2015) found that credit to SMEs has positive but insignificant influence on SMEs' growth in Nigeria, thus exhibiting inconsistency.

The dynamics of variations in the influence of current and lagged monetary policy tools is in line with the findings of Osinubi (2005) consequent upon which he posits that the existence of a long and variable lag suggests that government monetary policy should not attempt to be actively anti-cyclical but should behave in a manner that is cyclically neutral. Also since monetary transmission mechanism plays a major role as far as the timing of monetary policy is concerned.

It is also surprising that money supply and credit to SME have not been able to aid SMEs performance in Nigeria. The implication is that these variables cannot be considered as any form of effective monetary policy tools in boosting performance of SMEs in Nigeria, whereas interest rate and inflation rate can be considered as more potent monetary policy tools. Contrary to expectation interest rate is positively related to performance of SMEs which may be a pointer to the challenges that SMEs that have been starved of fund no longer care about borrowing cost but are more concerned about access to borrowing; and strive to expand their operations and sales volume while managing costs more efficiently in other areas to cover for high cost of borrowing.

The coefficient of determination value (R^2) of 0.6556 indicates that the model adopted in this study explained about 65.56% variation in SME's performance in Nigeria. The Durbin-Watson statistics value of 1.9033 indicates the absence of autocorrelation in the patterns of data used in this analysis. The values of the various information criteria are within range, and they lend credence to the model quality in terms of closeness of fit and numbers of parameters.

5. SUMMARY AND CONCLUSION

The small and medium size enterprises play a key role in the global economy contributing between 40–60% of the gross domestic products of many countries. In Nigeria SMEs contribute 48% of national GDP, account for 96% of businesses and 84% of employment and they are about a total of 17.4 million in number. Despite the significance of MSEs in the Nigerian economy, yet they face a myriad of challenges despite all government's efforts at tackling such challenges ranging from political, macroeconomic, and monetary policy environment. Thus, we examine the role of monetary policy on the performance of SMEs in Nigeria from 1981 to 2020 using data obtained from the CBN Statistical Bulletin. The study tested the time series properties of the variables employed which confirmed that they exhibit mixed stationarity thus we employed the Autoregressive Distributed Lag (ARDL) model to examine the long run relationship between monetary policy and SME output.

The study found that monetary policy proxied by money supply although has positive impact on SMEs output, its impact is insignificant. Likewise loans to SMEs plays no significant role in enhancing SMEs' output in Nigeria and its effect is even negative in

current period but positive at one-year lag. In fact, the outcome of monetary policy on SME output has been counterproductive as factors like loans to SMEs affects SMEs negatively while interest rate has positive effect.

However, an important lesson from this study stems from the finding that loans to SMEs has negative influence in the current period but positive at one-year lag on SMEs performance. We infer that although the variable is not significant in both periods, it may imply that the benefits of loans granted to SMEs are delayed and not derivable in the immediate sense. Therefore, for SMEs to benefit maximally from bank credits a consideration of at least one year moratorium and other incentives should be given very serious attention by the banks and the CBN. Medium to short term loans will be more beneficial for boosting the performance of SMEs in Nigeria while bank overdrafts or short term loans may appear generally counterproductive.

The study concludes that monetary policy does not appear to be a potent tool for boosting SMEs performance in Nigeria. It therefore, recommends that the CBN should continue to impress on banks to increase lending to SMEs under more favourable terms (moratorium, interest rate, tenor etc.) and the CBN should continue with its interventions in the SMEs sector. We further recommend that SMEDAN should expedite actions on floating its proposed microfinance bank which is expected to appreciate the peculiarities of the SMEs better than the conventional banks and design more favourable credit packages/products that would accommodate their challenges and promote their performance. The inability of monetary policy to drive performance of SMEs in Nigeria in the desired direction suggests that there may be need for the CBN to look further into its monetary policy and its applications with special attention to SMEs. A suitable and well-balanced combination of fiscal and monetary policy tool may also be an option to consider arising from the inadequacy of monetary policy to drive SMEs performance in Nigeria such that the sector can contribute optimally to the growth and development of Nigeria.

REFERENCES

Akinjare, A.A., Babajide, A.A., Isibor, A.A., Okahon, T. (2016). *Monetary policy and its effectiveness on economic development in Nigeria. "Journal of International Business Management"* No. 10(22).

Ayuba, B., Zubair M. (2015). *Impact of Banking Sector Credit on the Growth of Small and Medium Enterprises (SME's) in Nigeria. "Journal of Resources Development and Management"* No. 15.

CBN (2020). *Monetary, credit, foreign trade and exchange policy guidelines for fiscal years 2020/2021. "Monetary Policy Circular"* No. 43, April.

Essien, S.N., Manya, G.A., Arigo, M.O.A, Bassey, K.J., Ogunyinka, S.F., Ojegwo, D,G., Ogbuchi, F. (2016). *Monetary policy and unemployment in Nigeria: Is there a dynamic relationship?* CBN "*Journal of Applied Statistics"* No. 7(1), June.

Friedman, M. (1968). *The Role of Monetary Policy. "American Economic Review"* No. 58(1).

Granger, C.W., Newbold, P. (1974). *Spurious regressions in econometrics. "Journal of Econometrics"* No. 2.

Jhingan, M.L. (2010). *Macroeconomic Theory*. Delhi, India: Vrinda Publications (P) Ltd.

Korwatanasakul U., Paweenawa, S.W. (2015). *Trade, global value chains, and Small and Medium-Sized Enterprises in Thailand: A firm-level panel analysis. "ADBI Working Paper Series"* No. 1130, May 2020, Asian Development Bank Institute.

Mujahid, N., Begam, A., Nargis (2019). *SMEs output and GDP growth: a dynamic perspective.* *"Journal of Asian Business Strategy"* No. 9(1).

Nairametrics.com (2021). CBN decries Nigeria's N617.3 billion financing gap for MSMEs. Access on the internet: www.nairametrics.com.

NTO Philips, O.O., Mbanasor, J.A., Osuala, A.E. (2012*). Influence of monetary policy variables on loan supply to Small and Medium Scale Enterprises in Nigeria. "International Journal of Economics and Finance"* No. 4(7).

Nwosu, K.O. (2020). *Government fiscal and monetary policy framework: challenges for SMEs and entrepreneurship in Nigeria's developing economy*. Thesis submitted in accordance with the requirements of the University of Liverpool for the degree of Doctor of Business Administration.

Okay, O.E. (2010). *Monetary policy and economic development: Lessons from the deregulation policy in Nigeria.* *"International Journal of Development and Management Review* (INJODEMAR)"* No. 5(1).

Oladimeji, M.S., Sofoluwe, N.A., Odunaya, H.A. (2021). *Macroeconomic business environment and development of Small and Medium enterprises in Nigeria.* *"Modern Management Review"* No. 26(4).

Onyeiwu, C. (2012). *Monetary policy and economic growth of Nigeria.* *"Journal of Economics and Sustainable Development"* No. 3(7).

Osinubi, T.S. (2005). *Lags in the effect of monetary policy in Nigeria. "Pakistan Economic and Social Review"* No. 43(1), Summer.

PwC Nigeria (2020). *PwC MSME's survey.* Access on the internet: https://www.pwc. com/ng/en/events/nigeria-sme-survey.html.

Sanni, M., Oke, L.A., Alayande, I.T. (2020). *Bank credit accessibility and performance of SMEs in Kwara State, Nigeria: A PLS-SEM analysis.* *"Copernican Journal of Finance & Accounting"* No. 9(2). DOI: 10.12775/CJFA.2020.007.

Shrestha, M.B., Bhatta, G.R. (2018). *Selecting appropriate methodological framework for time series data analysis.* *"The Journal of Finance and Data Scie*nce" No. 4.

The Central Bank of Nigeria, Abuja. Access on the internet: https://livrepository. liverpool.ac.uk/3110710/1/H00030594_Nov2020.pdf.

World Bank (2022). *Small and Medium Enterprises (SMEs) finance: Improving SMEs' access to finance and finding innovative solutions to unlock sources of capital*. Access on the internet: https://www.worldbank.org/en/topic/smefinance.