MONETARY POLICY AND FINANCIAL STABILITY IN NIGERIA

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Abstract

This study investigates the dynamic effects of monetary policy on financial stability in Nigeria between 1986 and 2017. This is with the view of assessing the relationship between the monetary policy transmission channels and financial stability in Nigeria. The study made use of secondary data. The variables, such as financial stability index, exchange rate channel, credit channel, interest rate channel, financial deepening and price stability were sourced from statistical bulletin of Central Bank of Nigeria (CBN), National Bureau of Statistics and World Development Indicators (WDI). Data collected were analysed within Vector Error Correction Framework. The results showed that exchange rate channel was a dominant channel of monetary policy transmission in Nigeria as far as financial stability was concerned. The study concluded that changes in monetary policy had a significant influence on financial stability in Nigeria and that exchange rate channel was the dominant channel of monetary policy transmission to ensure financial stability in Nigeria.

Keywords: Exchange Rate, Financial Stability, Financial Deepening, Monetary Policy, Nigeria.

JEL Classifications: E5, E52, E3, G1, G2.

Introduction

Nigeria's monetary policy is presently transforming into an ideal market-based system, and the monetary policy effectiveness remains a subject of academic debate due to the period required for the monetary policy transmission which lessens monetary policy effectiveness (Fu & Liu, 2015; Zhao, Chen & Hao, 2018). Monetary policy transmission channel is described as the channel or means through which monetary policy actions influence economic activities such as real GDP, aggregate demand, general price level and stability of financial system (Nyumuah, 2018; CBN, 2010). Specifically, monetary policy, according to Ezeaku, Ibe, Ugwuanyi, Modebe and Agbaeze (2018), is described as the process of controlling the availability of money and credits, cost (interest rate) and value in an economy in order to achieve the favourable level of employment, output, prices, and other economic objectives. Monetary policy stance can be either expansionary or contractionary. It is expansionary in a situation whereby the monetary authority increases the supply of money in circulation with a view to reducing the cost of money and stimulating economic activities while it is contractionary when monetary authority reduces money supply which possibly ensure increased cost of money and lowers the speed of economic activities (Ezeaku, *et al*, 2018). Financial stability describes the ability of a financial system which comprises of financial markets, financial intermediaries and other financial infrastructures, to permanently ensure an effective distribution of the financial resources without disturbances (Alsamara, Mrabet, Jarallah, & Barkat, 2018;Nair & Anand, 2020).

Most less developed countries especially Nigeria has been challenged by various structural and financial problems ranging from poor physical infrastructure and weak institutions; high inflation and devaluation rates which discouraged savings; low level of locally mobilized savings for productive investment; high poverty level, high unemployment rate, environmental degradation and poor sanitation; economic hardships inflicted by financial instability and economic and financial crisis (Nwosa & Saibu, 2012).

Despite serious efforts of Central Bank of Nigeria (CBN) in effectively utilizing monetary policy instruments to influence the financial system, the above problems seem to persist and hinder the financial stability objectives of monetary policy. These structural problems have resulted to the downturn in economic activities; and the rise of the financial instability was revealed especially by the financial crisis in 2008 (Ouhibi & Hammami, 2015). However, monetary policy has continued to play a vital role in the regulation of both real and financial sector in developing countries especially Nigeria since the introduction of SAP in 1986. The purpose of embarking on financial system regulation is majorly to ensure financial stability in the economy.

The issue of financial instability is partly a result of persistent lack of effective monetary policy transmission channels that could foster financial stability as well as poor economic performance orchestrated by instability in the Nigerian financial sector have caught the attention of researchers in recent decades. Similarly, the prominence of financial system in the conduct of monetary policy has been well documented since monetary policies directed towards influencing some macroeconomic variables are essentially a financial practice, in which financial system serving as the connection between the real economy and the central bank policies (Ma & Lin, 2016). A number of reasons have been cited to be responsible for persistent financial instability in Nigeria ranging from poor financial policies implementation to ineffective monetary policy transmission channels (Nwosa & Saibu, 2012). This has subjected the interrelationship between monetary policy and financial stability in Nigeria to further empirical scrutiny.

On the empirical side, evidence from Nigeria indicated that studies have extensively focused on the identification of most effective monetary policy transmission channels in Nigeria (Nwosa & Saibu, 2012; Ishioro, 2013; Ndekwu, 2013; Obafemi & Ifere, 2015; Matousek & Solomon, 2017; Kalu, 2017). However, studies on the link between monetary policy transmission channels and financial stability are very scanty. The closely related works in the literature are studies conducted by Ouhibi and Hammami (2015) and Ezeaku *et al*. (2018). Ouhibi and Hammami (2015) investigate the relationship between monetary policy and financial stability; and find that effects of interest rates on selected asset prices depends on exchange rate regime adopted in different countries. For countries with flexible regime of exchange rate system, interest rate promotes stability in the financial sector while it is not effective in countries where fixed exchange rate regime is adopted. This throws a further scrutiny in the context of Nigeria in which its currency has suffered either depreciation or devaluation over the years. The Nigerian study of Ezeaku *et al*. (2018) focuses on the industry effect of monetary policy transmission channels. The authors discover that interest rate, private sector credit and exchange rate channels have negative impact on output growth in short run and long run periods. This present study is a great departure from Ezeaku *et al*. (2018) since the focus is not on industry effect but financial stability effect of monetary policy transmission channels. In this regard, establishing the effect of monetary policy transmission channels on financial stability in Nigeria has without doubt constituted a gap in the literature and remains a matter of further empirical investigation. Therefore, this study examines the dynamic relationship between the monetary policy transmission channels and financial stability in Nigeria.

The contributions of this study are of two folds. First, we contribute to the ongoing debate on the importance of monetary policy in achieving stability in the financial sector. Financial stability represents one of the prerequisites for a sustainable economy (Nwosa & Saibu, 2012; Ajide, 2021). This study is pertinent at this time, in view of accelerating the achievement of sustainable development goals in Nigeria. The effect of financial crisis on Nigerian economy was severe as it experienced downturn in every sector especially the financial sector despite huge amount of resources that have been expended on financial sector reforms

(Ajide, 2019, 2020). It is believed that without stability in financial sector, economic stability in any country may continue to be a mirage. Therefore, this study is timely given the level of instabilities in Nigerian macroeconomic variables. Second, financial stability as an area of research has not received much attention particularly in Africa. There is limited literature investigating the specific relationship between monetary policy and financial stability. Therefore, it becomes an interesting enquiry by linking financial stability to monetary policy in Nigerian context. Thus, this study serves as an extension of knowledge in this respect; most importantly in the context of an African economy. Findings from this study offer new insights to policy makers on various ways of making monetary policy tools to be more effective in this era of inclusive financial system.

Apart from this introductory section, the study is made up of four sections. Section 2 explains the review of related literature, section 3 depicts the methodology, section 4 illustrates the empirical analysis and section 5 consists of summary, conclusion and recommendations.

Literature Review

Theoretical framework

The Neo-Keynesian theory was developed by a group of economists notably John Hicks, Franco Modigliani and Paul Samuelson who attempted to interpret and formalise Keynes' ideas; and to synthesise them with the neo-classical economics in the post-war period from the writings of John Maynard Keynes. This theory was adopted to explain the role that monetary policy plays in the stabilization of financial sector. The new Keynesians believe that monetary policy plays a key role in the stability or instability of financial sector and that financial instability can lower the long run level of growth (Cecchetti, Disyatat & Kohler, 2009). According to Williams (2014), the most important responsibility of monetary policy is to protect the real economy from financial sector shocks. Regarding this, Keynes noted that the role of monetary policy in ensuring real and financial sectors' stability cannot be underestimated (Dymski, 1988).

Borio (2011) identifies two dimensions of financial system risk which form the channels through which monetary policy could influence financial stability. These are time and cross-sectional dimensions. Time dimension of financial system risk includes managing, over time, the growth of aggregate financial system's risk. This is also referred to as macro-financial channel, based on expected feedback between financial system and monetary policy in an economy (Morgan & Pontines, 2014). The macro-financial channel works through various monetary policy transmission channels, which include the following: credit channel, interest rate/risk channel, asset value channel, exchange rate channel (currency mismatches), liquidity-interbank and other money markets (maturity mismatches) channel, leverage channel and interest rate/risk channel (Morgan & Pontines, 2014). The New-Keynesian theory suggests that the aggregate demand curve is downward – sloping because a lower price level (P↓), holding the nominal quantity of money (m) constant, leads to a larger quantity of money in real terms (M/P↑) which in turn causes interest rate to fall (i↓), this reduces cost of financing and stimulates investment spending (I↑). The increase in planned investment spending add directly to aggregate demand (Y^{ad}↑). If it is an open economy where exchange rate is involved, the transmission channel can be schematically described as follows

$$P \downarrow \Rightarrow {}^{M}/_{P} \uparrow \Rightarrow i \downarrow \Rightarrow E \downarrow \Rightarrow N\text{x} \uparrow = \text{Y} \uparrow$$

Empirical literature

In investigating the effect of financial instability on economic performance in 27 European Union member states covering the period of 1998 and 2011, Creel, Hubert and Labondance (2015) employed GMM estimation technique and found that financial instability impedes economic growth. Focusing on the relationship between financial development and monetary policy transmission channels in 41 developed and developing economies over the period of 2005 and 2011, Ma and Lin (2016) employed fixed effect model and found that the effectiveness of monetary policy declines as the financial system becomes more developed in developing economies while the effect of monetary policy on inflation is strengthened with

financial development in advanced economies because advanced economies have deeper and more efficient financial intermediaries, financial markets, more stable and less capital flight, availability of more financial instruments to direct money and credit to increase output, more independent central banks and the adoption of explicit inflation targeting as the dominant monetary policy regime to control inflation than developing economies.

In the US, Igan *et al* (2016) examined the transmission of monetary policy shocks through private sector balance sheets between 1990 and 2008. The result of the Factor-Augmented Vector Autoregression (FAVAR) model disclosed that monetary policy tightening results in a slightly delayed fall in inflation and a stronger negative impact on output and unemployment while financial frictions operating through the private sector balance sheets play an important role in monetary policy transmission. For 10 OECD countries, Merrouche and Nier (2017) applied fixed effect technique to explore the relative importance of capital flows, monetary policy and the supervisory environment on financial imbalances in the run-up to the global financial crisis from 1999 to 2007. The empirical results reveal that the effect of inflows on the build-up was intensified where the supervisory and regulatory environment was relatively weak while differences in monetary policy did not significantly affect differences across countries in the build-up of these financial imbalances ahead of the crisis.

Ouhibi and Hammami (2015) employed SVAR estimation technique to analyze the relationship between monetary policy and financial stability in 5 south Mediterranean countries (Tunisia, Morocco, Egypt, Lebanon, Jordan and Turkey) over the period 2006M1-2013M12. The result of the study disclosed that interest rate is conducive to financial stability in countries that adopt a flexible exchange rate regime such as Tunisia, Morocco, Egypt and Turkey while interest rate is not an effective tool for promoting financial stability in a fixed exchange rate regime country such as Jordan and Lebanon. In a specific country study, Rafiq (2015) explore how monetary policy affects the real economy and its effectiveness in promoting financial stability in Bangladesh using VAR technique. The result indicates that monetary policy modestly impacts real economic activity and inflation via the bank lending and financial accelerator channels. Ezeaku et al (2018) utilized error correction technique to investigate the impact of monetary policy transmission channel on industrial development spanning 1981 and 2014. The results of the study indicate that credit, interest rate, and exchange rate channels retard real output growth in Nigeria. Differently, Lawal *et al* (2018) explored the impact of the interactions between fiscal and monetary policies on stock market behavior from 1985 and 2015. The result of the ARDL technique showed that monetary policy influence stock market behavior directly through the interest rate channel and indirect through credit channel, exchange rate channel and the Keynesian automatic stabilizer channel.

In investigating the transmission channels of monetary policy impulses on sectoral output growth in Nigeria for the period 1986 to 2009, Nwosa and Saibu (2012) utilized Vector Auto-regressive Method and found that interest rate channel was effective in transmitting monetary policy to Agriculture and Manufacturing sectors while exchange rate channel was most effective for transmitting monetary policy to Building/Construction, Mining, Service and Wholesale/Retail sectors. The study concluded that interest rate and exchange rate policies were the most effective monetary policy measures in stimulating sectoral output growth in Nigeria. Conversely, Owolabi and Adegbite (2014) used multiple regression to examine the impact of monetary policy on industrial growth covering the period of 1970-2010. The study found that rediscount rate and deposit have significant positive effect on industrial output, whereas treasury bills do not have a positive impact on industrial output. Using VECM technique, Yakubu, Barfour, and Shehu (2013) investigated the effectiveness of monetary-fiscal policies on price and output growth in Nigeria. The empirical result indicates that money supply and government revenue have a greater positive influence on prices and output in the long run. In a related study, Sethi and Acharya (2019) investigated the relationship between inflation and financial instability over a period of 1990-2015 in Asian countries. They discoverd that inflation targeting policy had an adverse impact on financial stability. Using SVAR model, Venter

(2020) examined the impact of monetary policy shocks on financial stability. He discovered that monetary policy is useful for correcting asset mispricing and to control business cycle.

Materials and methods

In order to investigate the dynamic relationship between monetary policy and financial stability in Nigeria over the period of 1986-2017. A dynamic model is developed to explain the contemporaneous or instantaneous relationship among monetary policy channels (interest rate, credit and exchange rate channels) and financial stability in Nigeria. Moreover, with a view to explaining the dynamic relationship among these variables, the study employs a Vector Error Correction Method (VECM).

The model is thus specified in equation (1);

$$Z_t = \alpha_0 + \sum_{i=1}^{p} \beta Z_{t-1} + \varepsilon_t \quad (1)$$

Equation (1) contains a VAR (p) process where Z_t is a vector of endogenous variables, α_0 is an (nx1) vector of constants, β is an (nxn) matrix of co-efficients, p is the maximum lag length, and ε_t is an (nxn) vector of error terms. Although, the dynamic relationships among variables are modeled empirically as a VECM, but a simple linear model based on economic theory is used to model the contemporaneous relationships. The vector of endogenous variables contains financial stability (FIS), interest rate channel (INT), credit channel (CRT), exchange rate channel (EXR) and the control variables, financial deepening (FID) and price stability (PRS) (Ouhibi & Hammami, 2015; Rafiq, 2015; Criste & Lupu, 2014).
In explicit term, equation (1) is transformed to model the variables of interest in a VAR process as in equation (2).

$$Z_t = (fis_t, \text{int}_t, crt_t, exr_t, fid_t, prs_t)' \quad (2)$$

Where fis_t denotes financial stability, int_t, crt_t and exr_t are interest rate, credit and exchange rate transmission channels of monetary policy while fid_t represents financial deepening and prs_t is inflation rate (price stability). One of the benefits of VECM technique is that, it accounts for the dynamic properties and relation of time series variable. VECM technique is better compared to a single approach for capturing the long run dynamic relationship among variables (Ahmet, 2008). VAR model is a common framework that is used to explain the dynamic interrelationship among stationary variables.

On data sources and variable measurements, our study uses data spanning over a period of 1986-2017. The literature documents three aspects of financial system that are crucial for financial stability. These include financial development, financial vulnerability and financial soundness (Nasreen, Anwar & Ozturk, 2017). The financial development indicators reflect various development in Nigerian financial system. For this purpose, two indicators of financial sector development are used, and these are: domestic credits to private sectors/GDP (DCP) and stock market capitalization/GDP (SMC). The second aspect is financial vulnerability which reflects macroeconomic conditions and funding structure of banking institutions which affect its liquidity and solvency. For this purpose, two indicators of financial vulnerability are also used, and these are: fiscal deficit as a percentage of GDP and current account deficit as a percentage of GDP. Lastly, financial soundness describes the vibrancy of financial system and its ability to guard against potential shocks (Nasreen, Anwar & Ozturk, 2017). Bank capital as a percentage of total asset and liquidity asset as a percentage of total asset were used as proxies for financial soundness. The study takes the advantage of Principal Component Analysis (PCA) to obtain an aggregate Financial Stability Index (FSI). These six indicators were used to construct financial stability index through PCA. Moreover, monetary policy transmission channels were proxied by the nominal interest (lending) rate, nominal exchange rate and credits to private sectors. An interest rate is the proportion of the principal charged by the lender for the use of the loan or for the use of the deposits. This channel is measured through the lending nominal

interest rate. The study employs official exchange rate as a proxy for exchange rate channel. The price of a country's domestic currency in terms of another currency is described as exchange rate. The Credit Channel is proxied by credits to private sectors. This indicator reflects the total value of credits granted by financial intermediaries to the private sectors excluding credit to the public sector. This measure also excludes credits issued by the central bank and development banks. Thus, private credit captures the amount of credit channeled from savers, through financial intermediaries, to private firms.

Other explanatory variables include price stability (inflation rate) and financial deepening. The study makes use of broad money supply as a share of GDP to measure financial sector development in line with Rafindadi and Ozturk (2017), Rafindadi and Yusuf (2015). The ratio of the liquid assets of the financial system (M_2) to GDP, is related to the ability of financial systems to provide transaction services and saving opportunities. The study employs consumer price index to indicate price stability or **i**nflation as a measure of macroeconomic instability and it is the rate at which the general level of prices for goods and services is rising and, consequently the purchasing power of currency is falling. All the data for the variables were sourced from World Bank Development Indicator Database (2017); National Bureau of Statistics and Central Bank of Nigeria (CBN) Statistical Bulletin, 2017 edition.

Results and discussion

Descriptive statistics and correlation

It has become highly imperative to consider the descriptive statistics of variables prior to analyzing time series data in order to circumvent the problem of multicolinearity among the independent variables which can affect the outcome of the regression estimate (Agun, 2009). Also, the descriptive statistics is important in order to observe the distribution and the variability of the variables.

Table 1 provides the descriptive statistics of the data series employed in the study. For all the variables, the mean and median values lie within their maximum and minimum values showing a good level of consistency. However, financial stability index is the least volatile variable with standard deviation of 1.441 since it has lowest value of standard deviation whereas exchange rate is the most volatile variable with 70.206 of standard deviation, being the highest standard deviation. The skewness statistics revealed that credit to private sector channel is the only negatively skewed variable while every other variable is positively skewed. This implied that credit to private sector was asymmetrically distributed to the left (left-tailed) while other variables were asymmetrically distributed to the right (right-tailed).

The kurtosis of the three of the six variables included in the analysis, namely; financial stability index, interest rate channel and price stability proxied by consumer price index exceeds 3, meaning that the series are leptokurtic (peaked) relative to normal distribution while credit to private sector channel, exchange rate channel and financial development are platykurtic since their respective kurtosis are less than 3, which implies that their distribution are flatter relative to normal distribution.

Table 1: Descriptive Characteristics of Data

	FIS	INT	LCRT	EXR	FID	PRS
Mean	-5.160	19.094	6.603	88.681	14.486	20.281
Median	-0.202	18.184	6.639	111.231	13.063	12.217
Maximum	4.310	31.650	9.956	253.492	21.290	72.835
Minimum	-1.904	9.959	2.724	1.754	9.151	5.382
Std. Dev.	1.441	3.985	2.340	70.206	3.930	18.825
Skewness	1.484	0.859	-0.072	0.212	0.573	1.522
Kurtosis	5.124	5.043	1.729	2.002	1.807	3.894

Observations	31	31	31	31	31	31

Note: FIS, INT, LCRT, EXR, FID, PRS represent financial stability index, interest rate channel, credit to private sector channel, exchange rate channel and price stability proxied by consumer price index respectively.
Source: Authors' computation

Table 2 presents the correlation matrix that showed the degree of association among the variables. It showed that while most of the variables are positively associated with financial stability, two variables (interest rate and price stability) were negatively related. However, the negative relationship between interest rate and financial stability reveals high fluctuations in interest rates which is unsuitable for financial stability objective of CBN. Similarly, the negative relationship between financial stability and consumer price index is understandable because macroeconomic instability (as indicated by the rate of inflation) is detrimental to growth and stability of the financial sector. This is consistent with the argument that macroeconomic instability is disastrous to economic growth of developing and developed countries. High inflation increases uncertainty and risk in the economy which can adversely reduce long-term investment and thereby affecting financial stability. However, credit to private sector, exchange rate and financial development have positive relationships with financial stability.

Table 2: Correlation Matrix of the macroeconomics' variables in the study

	FIS	INT	LCRT	EXR	FID	PRS
FIS	1.000					
INT	-0.284	1.000				
LCRT	0.381	-0.246	1.000			
EXR	0.310	-0.230	0.933	1.000		
FID	0.424	-0.281	0.839	0.816	1.000	
PRS	-0.335	0.416	-0.441	-0.480	-0.347	1.000

Note: FIS, INT, LCRT, EXR, FID, PRS represent financial stability index, interest rate channel, credit to private sector channel, exchange rate channel and price stability proxied by consumer price index respectively.
Source: Authors' computation

Unit root test results

In an attempt to test for the stationarity of the variables, this study employed both the Augmented Dickey-Fuller (ADF) unit root test and the Phillip-Peron (PP) unit root test. The results of the ADF and the PP tests are as shown in Table (3). The ADF and PP test result contained in the table indicates that all the variables are not stationary in their level form but become stationary after they are first differenced, and thus, all the variables are integrated of order 1.

Table 3: Unit Root Test of Annual Data Series

	ADF Test			PP Test		
Variables	Level	First Diff	Status	Level	First Diff	Status
FIS	-1.967	-4.196	I(1)	-1.720	-4.080	I(1)
	[0.298]	[0.002]*		[0.411]	[0.003]*	
INT	-1.202	-9.267	I(1)	-0.128	-6.245	I(1)

	[0.658]	[0.000]*		[0.631]	[0.000]*	
LCRT	-1.170	-4.130	I(1)	-1.161	-4.025	I(1)
	[0.673]	[0.003]*		[0.677]	[0.004]*	
EXR	0.894	-3.458	I(1)	0.749	-3.431	I(1)
	[0.994]	[0.016]**		[0.991]	[0.017]**	
FID	-0.538	-4.784	I(1)	-0.635	-4.850	I(1)
	[0.869]	[0.000]*		[0.848]	[0.000]*	
PRS	-0.768	-3.670	I(1)	-3.162	-6.178	I(1)
	[0.373]	[0.011]**		[0.111]	[0.000]*	

Source: Authors' computation.

Note: FIS, INT, LCRT, EXR, FID, PRS represent financial stability index, interest rate channel, credit to private sector channel, exchange rate channel and price stability proxied by consumer price index respectively. Note 2: The values in the square bracket [ ] are the probability values; (*) indicates significant at 1% level, (**) indicates significant at 5% and (***) indicates significant at 10%.

Johansen cointegration test

Following the results in the Table 3 which revealed that all the variables are stationary at first difference and at different levels of significance, there is the need to determine the long-run relationship among the variables. To achieve this, Johansen cointegration test was employed to determine the existence of long-run relationship among financial stability (FIS), interest rate channel (INT), exchange rate channel (EXR), credit channel (CRT), financial deepening (FID) and price stability (PRS) in Nigeria between 1986 and 2018. It was evidenced from the Johansen cointegration test results in the Tables 4 that the null hypothesis of no cointegration among the variables at 5% level of significance for the model specification was rejected. The trace statistics revealed that there are cointegrating relationships among the variables. Similarly, the unrestricted cointegration Max-Eigenvalue statistic reports that there exist three cointegration equations at 5% level of significance. This implies that the variables have long-run relationship.

Table 4: Johansen Cointegration Test Results: Unrestricted Cointegration Rank Test

	Trace		Maximum Eigenvalue	
Hypothesised No of CE(s)	Trace statistic	Prob**	Max-Eigen Statistic	Prob**
None *	146.1102	0.0000	64.57797	0.0000
At most 1 *	81.53222	0.0000	43.16375	0.0002
At most 2 *	38.36847	0.0041	26.64117	0.0076
At most 3	11.72730	0.1705	10.72617	0.1685
At most 4	1.001137	0.3170	1.001137	0.3170

*Note: Trace test and Max-eigenvalue indicate 3 cointegrating egn(s) at 5% level of significance.**MacKinnon-Haug-Michelis(1999) p-values. Source: Authors' computation*

Lag length selection criteria

In order to estimate the Vector Autoregressive model specification stated in chapter three, it is appropriate to determine the optimal lag length to be used. The selection of an appropriate lag length is as important as determining the variables to be included in any system of equations. As models with fairly large number of lags have the tendency of generating residuals that tend towards the white noise process. On the other hand,

when the lag length is not enough, the models can fail to generate appropriate residuals that are random enough to approach a white noise process. That is, the more lags included in a model, the more loss of initial values.

It is important to select the appropriate lag length in the autoregressive model since inferences in autoregressive model depends on the correct model specification. The lag selection result indicates several suggestions. From Table 5, it was evident that the various lag selection criteria produced conflicting results. LR test statistic, Final Prediction Error, Akaike Information Criterion and Hannan-Quinn depicts an optimal lag length of 2 while Schwarzt Information Criterion depicts an optimal lag length of 1. In this study, the AR root test is used to settle for the most stable lag length criterion recommended. From the AR root test (Figure 1), lag two is stable inside the AR root circle. Hence, lag length two (2) was more appropriate for model estimation and therefore used in this study.

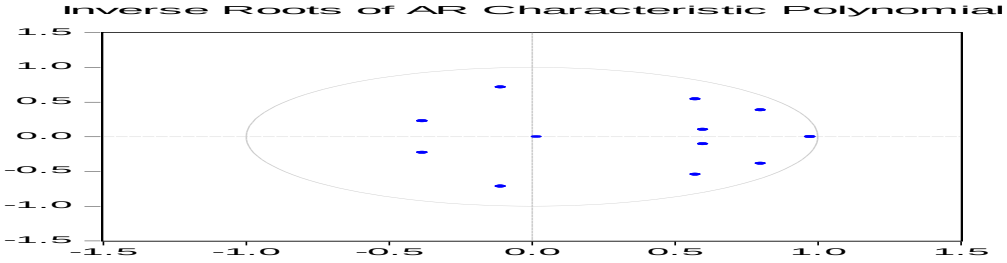

Figure 1: Inverse Roots of AR characteristic Polynomial (Source: Authors' computation)

The stability test of the model at lag 2 in Figure 1 indicated that the hypothesis that the estimated model is stable at lag 2 is significant and cannot be rejected. Figure 1 revealed that no root lies outside the unit circle (modulus), that is, all of the modulus of the complex root values are less than 1, it can therefore be concluded that the VAR model at lag 2 satisfies the stability condition.

Table 5: VAR Lag Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-497.853	NA	4969.368	34.748	35.031	34.837
1	-345.782	230.727	17583.02	26.743	28.723*	27.363
2	-289.464	62.144*	6162.690*	25.342*	29.019	26.494*

*Note: * indicates lag order selected by the criterion; LR, FPE, AIC, SIC and HQ indicate sequential modified LR test statistic, Final Prediction Error, Akaike Information Criterion, Schwarzt Information Criterion and Hannan-Quinn respectively.*

Diagnostic test

Diagnostic test results to establish the appropriateness of the model is equally germane. It is important to validate the robustness of the estimated model. This is done via VAR Residual Serial Correlation LM Tests and stability test. This is to provide more confidence in the estimate and forecasts from model specification. In other to verify the status of serial correlation in the estimated model, the Chi-squared (LM-Stat) and its corresponding probability values were observed. The serial correlation LM test in Table 6 indicated that the hypothesis of no residual serial correlation over the periods were not statistically significant, hence cannot be rejected but accepted. This shows that there is no serial correlation such that the error terms are random in the model. According to the Breusch-Pagan VAR residual serial Correlation LM Test, the null hypothesis of no serial correlation was tested against the alternative hypothesis of serial correlation. In Table 6, the Chi-squared has a value of (458.240), while its corresponding p-value is (0.691). Since the probability value is greater than 5% levels of significance, there is no evidence to reject the null hypothesis. Meaning that the null hypothesis is accepted and we conclude that there is no evidence of serial correlation in the estimated VAR model at lag 2.

Table 6: VAR Residual Serial Correlation LM Test

Lags	LM-Stat	Prob
1	NA	NA
2	458.240	0.691
3	NA	NA

Source: Authors' computation

Causality analysis between monetary policy transmission channels and financial stability

This section examined the causal relationship between monetary policy transmission channels and financial stability in Nigeria. The causal relationship is carried out through the VAR Granger Causality or Block Exogeneity Wald Tests has been observed in the literature that causality between variables exists only when the probability value from the Block Exogeneity Wald Tests is not greater than 5% level of significance. Thus, the causality test in this study was carried out by first estimating a VAR model with lag interval of 2 as stipulated by all information criteria except Schwarz criterion. The causality test was carried out in order to understand the causal relationship between monetary policy transmission channels (interest rate channel (INT), exchange rate channel (EXR) and credit channel (CRT)) and financial stability. The results of VAR Granger Causality or Block Exogeneity Wald Tests was presented in Table 7.

The results show that monetary policy channel proxied by official exchange rate (EXR) and domestic financial development (FID) Granger-cause financial stability (FIS) at 1% and 5% respectively. This implies that official exchange rate (exchange rate channel) and financial deepening have predictive power to explain changes in financial stability in Nigeria. The implication of the granger causality is that, monetary policy influencing the exchange rate and the reforms in the financial sector have effects on financial stability in Nigeria. Moreover, the results show that all variables together Granger-cause financial stability. However, the non-causal relationship between interest rate channel and financial stability indicates that monetary and financial sector reforms have not led to stable financial system in Nigeria.

In interest rate equation, the results show that credit to private sector (LCRT) and price instability proxied by inflation rate (PRS) Granger-cause interest rate at 5% respectively. This implies that monetary policy proxied by credit to private sector (credit channel) and inflation rate have predictive power to explain changes in interest rate in Nigeria. Moreover, the results show that all the variables together Granger-cause interest rate. More importantly, financial stability did not Granger cause interest rate.

However, in exchange rate equations, the result showed that none of the variables could Granger-cause exchange rate and all the variables together did not Granger-cause exchange rate. This is because its corresponding Wald test statistic is not significant judging by the probability value (P>0.05). Also, the results in credit channel equation revealed that none of the variables could Granger-cause credit to private sector and all the variables together did not Granger-cause credit to private sector. Also, financial stability did not Granger cause either exchange rate and credit to private sector respectively. In addition, the results of financial deepening equation showed that none of the variables could Granger-cause financial deepening but all the variables jointly Granger-caused financial deepening. Lastly, in PRS equation, the results revealed that interest rate, credit to private sector and financial deepening Granger-caused price instability proxied by inflation rate (PRS) at 1% level of significance respectively.

Table 7: The results of VAR Granger Causality or Block Exogeneity Wald Tests

	FIS	INT	EXR	LCRT	FID	PRS	ALL
FIS		1.056 (0.589)	9.585* (0.001)	2.551 (0.279)	6.079** (0.047)	1.475 (0.478)	20.910** (0.021)
INT	3.865 (0.144)		0.189 (0.909)	6.365** (0.041)	1.870 (0.392)	6.548** (0.037)	27.657* (0.002)

EXR	1.149 (0.562)	0.958 (0.619)		4.586 (0.101)	1.110 (0.574)	2.233 (0.327)	11.415 (0.326)
LCRT	3.205 (0.201)	0.190 (0.909)	0.285 (0.866)		0.620 (0.733)	0.534 (0.765)	6.511 (0.770)
FID	1.211 (0.545)	5.127 (0.077)	0.650 (0.722)	0.667 (0.716)		2.854 (0.239)	19.272** (0.036)
PRS	0.950 (0.621)	13.554* (0.001)	0.583 (0.747)	10.043* (0.006)	13.039* (0.001)		34.773* (0.000)

Note: FIS, INT, LCRT, EXR, FID, PRS represent financial stability index, interest rate channel, credit to private sector channel, exchange rate channel and price stability proxied by consumer price index respectively. Note 2: The values in the square bracket [ ] are the probability values; (*) indicates significant at 1% level, (**) indicates significant at 5% and (***) indicates significant at 10%. Source: authors' computation

Dynamic relationship between monetary policy and financial stability in Nigeria

The Impulse Response Function (IRF) and Forecast Error Variance Decomposition are two crucial reference point in analyzing the dynamic effects of monetary policy transmission channels on financial stability in Nigeria. This is because the statistical efficiency of the coefficient estimates from VAR are termed weak because of the interplay of several parameters, hence the Impulse Response Function (IRF) and Forecast Error Variance Decomposition are relied upon as better ways of analyzing the dynamic relationship among variables in autoregressive models.

Impulse response and variance decomposition are tools for assessing how shocks to economic variables reverberate through a VAR system. The impulse response functions show the effects of shocks on the adjustment path of the variables. The forecast error variance decomposition measures the contribution of each type of shock to the forecast error variance. The impulse response and variance decomposition offer a subtler way of analyzing the contributions of policy variables to target variables in a model. The conventional wisdom in economic modelling that forms the bedrock of VAR methodology is that policy variables influence target variables instantaneously while the target variables influence the policy variables subsequently through the system.

The VECM impulse response functions results

Impulse response analysis traces out the responsiveness of the dependent variables in a VAR to shocks from each of the variables (Brooks 2008). It also shows the effects of shocks on the adjustment path of the variables. It shows the size of the impact of the shock plus the rate at which the shock dissolves, allowing for the interdependencies. It also shows how each variable reacts dynamically to shocks. The ordering applied are financial stability (FIS), interest rate channel (INT), exchange rate channel (EXR), credit channel (CRT), financial deepening (FID) and price stability (PRS).

The impulse response function presented in Figure1 shows that the contemporaneous response of credit channel of monetary policy to own innovation displays a positive trend both in the short run and in the long run horizons. The result indicated that credit channel responds positively to a shock to itself. Also, credit channel of monetary policy responded negatively to a one standard deviation shock to exchange rate. The shock continued to maintain a negative trend throughout the time horizon. Thus, contrary to the response from credit channel of monetary policy to a one standard deviation shock to exchange rate was the response from credit channel of monetary policy to a one standard deviation shock to financial deepening as the shock maintained positive trend throughout the time horizon. Credit channel of monetary policy in the short-run had a negative relationship with financial stability in Nigeria before it started to exert positive effects on financial stability for the remaining period. The response of credit channel of monetary policy to interest in Nigeria displays a positive trend both in the short run and in the long run horizons while it was negative in the first period before the shocks to credit channel of monetary policy started to exert positive effects on price stability throughout the remaining period.

Also, the response in exchange rate due to forecast error stemming from credit channel was positive both in the short run and in the long run. That is, a one percent standard deviation shock to credit channel will boost exchange rate in the short run as well as in the long run (appreciation). This implies that stability of credit channel has a desirable effect on exchange rate appreciation throughout the time horizon. Similarly, the response of exchange rate to own innovation displays a positive trend both in the short run and in the long run horizons. The result indicated that exchange rate responds positively to a shock to itself. The response of exchange rate of monetary policy to a one standard deviation shock to financial deepening remained positive throughout the time horizons. On the contrary, the response of exchange rate to a one standard deviation shock to financial stability was neutral at the beginning of the time horizon, negative at a time, later became positive (all in the short run) and in the long run became negative throughout the remaining period. This implies that response in exchange rate exerted varied effects on financial stability throughout the remaining period. The respective responses of exchange rate to a one standard deviation shock to interest rate and price stability remained negative throughout the time horizons.

Financial deepening appeared to have responded positively to credit channel throughout the time horizon while it responded negatively to exchange rate throughout the time horizon. The contemporaneous response of financial deepening to own innovation displays a positive trend both in the short run and in the long run horizons. The effect of shock to financial deepening on financial stability showed that the response to a one standard deviation innovation in the financial stability was very small and positive both in the short run and in the long run. It could also be observed that the response of financial deepening to a one standard deviation shock to interest rate was positive in the short run before it started to exert minimal negative effects on in the long run while its effect on price stability remained negative throughout the time horizons.

The response of financial stability to a one standard deviation shock to credit channel of monetary policy was negative and became neutral in the short run. The effect later turned negative for the remaining time horizon. Also, financial stability exerted negative impact on exchange rate channel of monetary policy in the short run before it started to experience an oscillatory movement around the mean in the long run. The response of financial stability to own innovation displays a downward positive trend throughout the time horizons. The result indicated that financial stability responds positively to a shock to financial deepening, though the effect appeared declining gradually towards the long run. Similarly, financial stability responds positively to a shock to itself, though the effect appeared significant both in the short run and in the long run. That is, the results showed that current financial stability is affected contemporaneously by the shocks from its past value. On the contrary, the response of exchange rate to a one standard deviation shock to interest rate and price stability appeared negative throughout the time horizons.

The response of interest rate to a one standard deviation shock to credit channel of monetary policy, exchange rate channel of monetary policy and own innovation displays an oscillatory movement around the mean both in the short run and long run. This implies that changes in credit channel, exchange rate channel of monetary policy and own innovation have little or no effect on interest rate channel of monetary policy. Also, the respective responses of interest rate to a one standard deviation shock to financial stability and price stability were negative while the shock to financial deepening was positive throughout the time horizons.

The contemporaneous response of price stability to shocks in credit channel of monetary policy, interest rate and own innovation appeared positive throughout the time horizons. Similarly, the response of financial stability to a one standard deviation shock to financial deepening was also positive but was only negative in the short run before it started to exert positive impact in the long run. Again, the response of price stability to a one standard deviation shock to exchange rate channel of monetary policy as well as financial stability experienced an oscillatory movement around the mean in short run. This is an indication that changes in exchange rate channel of monetary policy and financial stability have little or no effect on price stability.

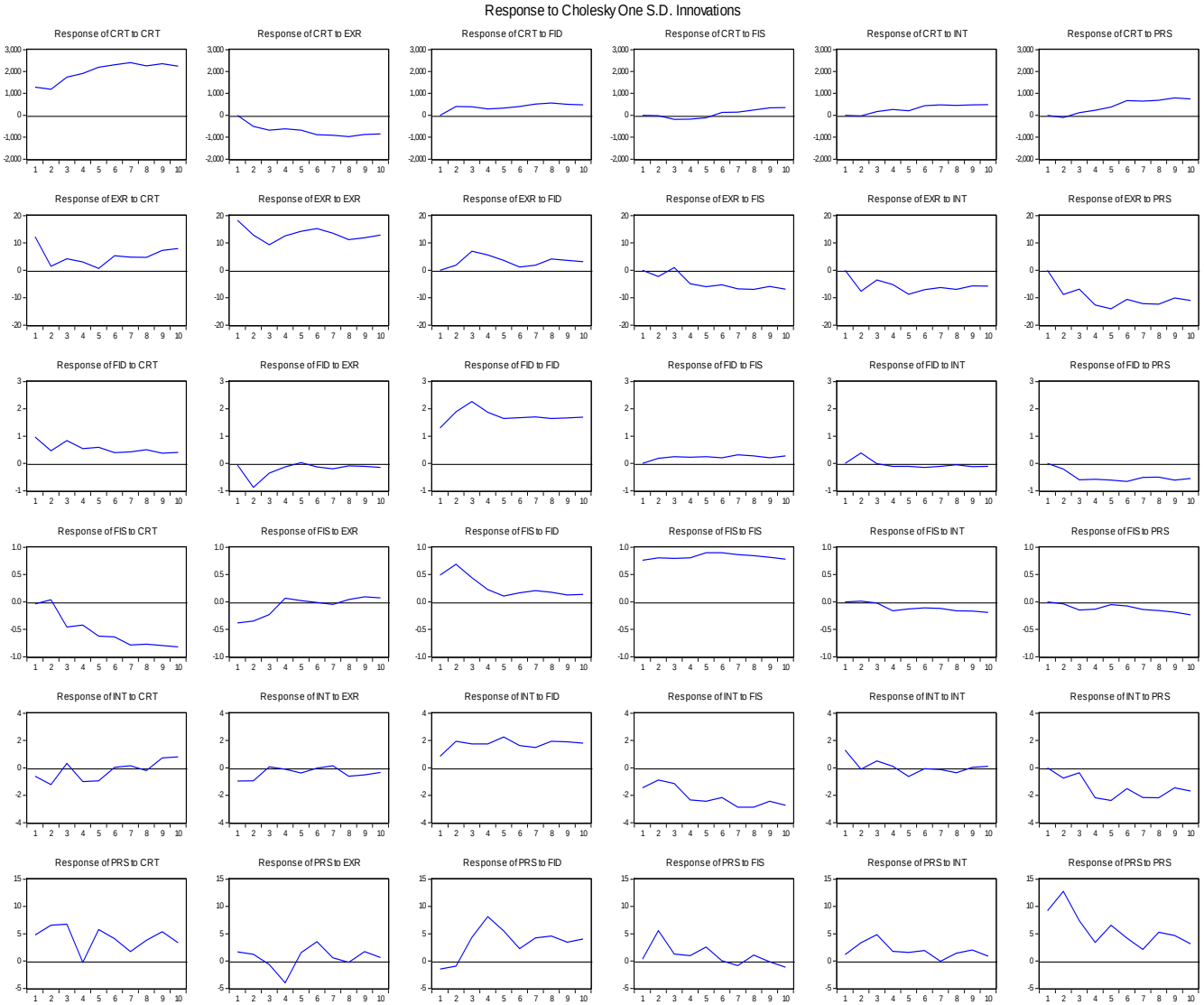

Figure 2: VECM Impulse Response Function Result

Variance decomposition

Variance decomposition analysis provides a means of determining the relative importance of shocks in explaining variations in the variable of interest (Andren, 2007). It offers information about the importance of each random innovation to the variables in the VAR model. Table 8 illustrates the variance decomposition of variables used in the model and is divided into four tables (a, b, c and d).

From Table (8a), it is illustrated that interest rate channel (INT), exchange rate channel (EXR), credit channel (LCRT), financial deepening (FID) and price stability proxied by inflation rate (PRS) did not explain variation in financial stability (FIS) in the short run which is the first period. However, interest rate explained 0.36% variation in the second period and increased to 1.92% in the fifth period before it increased to 3.85% in the tenth period which is the long run. Similarly, exchange rate channel of monetary policy transmission explained 1.17% in the second period and increased to 12.8% in the fifth period and 15.76% in the tenth period which is the long run. Also, credit channel of monetary policy transmission proxied by credit to private sector explained 3.58% in the second period and increased to 4.64% in the fifth period and 11.57% in the tenth period which is the long run. However, the result in Table (8a) also revealed that FIS's own shocks accounted for 100%, 52.17% and 44.29% variation in itself in the first, fifth and tenth periods

respectively, implying that financial stability own shocks fade out in the long run. This is consistent with the result from impulse-response analysis.

Furthermore, the results in Table (8b) showed that exchange rate channel, credit channel, financial deepening and price stability proxied by inflation rate (PRS) did not explain variation in interest rate (INT) in the short run which is the first period. But, financial stability explained about 0.69%, 3.88% and 7.79% variations in the first, fifth and tenth period respectively. Also, exchange rate explained about 0.16% variation in the second period and marginally increased to 0.47% and 2.39% in the medium and long run. In a similar way, credit to private sector explained about 5.03% variation in the second period and increased to 20.22% in the fifth period before decreasing to explain about 19.67% in the long run. The result also revealed that INT's own shocks accounted for 99.3%, 61.75% and 57.53% variation in itself in the first, fifth and tenth periods respectively, implying that financial stability own shocks fade out in the long run.

Table (8c) revealed the variation in exchange rate explained by financial stability and other variables. The result revealed that financial stability explained about 4.11%, 9.08% and 14.29% variations in the first, fifth and tenth period respectively. Also, interest rate explained about 0.31% variation in the second period and marginally increased to 2.11% in the medium run (fifth period) and 3.52% in the tenth period which is the long run. Also, credit to private sector explained about 0.46% variation in the second period and increased to 6.15% in the fifth period before increasing further to explain about 22.78% in the long run. The result also revealed that EXR's own shocks accounted for 95.38%, 77.98% and 55.92% variation in itself in the first, fifth and tenth periods respectively, implying that exchange rate own shocks fade out in the long run.

Lastly, the results in Table (8d) showed that variations in credit channel of monetary policy proxied by credit to private sectors explained by financial stability and other variables. The results showed that financial stability explained about 27.85% variation in the second period and increased to 30.27% in the fifth period but later decreased to 20.26% in the tenth period which is the long run. Similarly, monetary policy proxied by interest rate explained about 14.41% in the first period and increased to explain about 17.17% in the fifth period and later increased to 24.41% in the tenth period which is the long run. Moreover, the variation in credit explained by exchange rate was relatively minimal. It explained about 1.15%, 1.46% and 6.04% in the second period, fifth period and tenth period respectively. This implied that exchange rate has limited predict power to explain variations in credits to private sector in the short and medium run. LCRT's own shocks accounted for about 70.16%, 43.74% and 31.22% variation in itself in the first, fifth and tenth periods respectively, implying that credit to private sector own shocks fade out in the long run.

Conclusively, the implication of this result is that exchange rate has a substantial power to predict fluctuations in financial stability compared to other monetary policy variables in the medium and long run. This is consistent with the result from impulse-response analysis that the exchange rate channel was an important channel of monetary policy transmission. The results from variance decomposition confirmed that the exchange rate channel was a dominant channel of monetary policy transmission to achieve financial stability in Nigeria. However, interest rate channel and credit channel, also played some part in transmitting monetary policy shocks to financial stability in Nigeria, especially in the long run.

Table 8a: Variance Decomposition of Financial Stability (FIS)

Period	S.E.	FIS	INT	EXR	LCRT	FID	PRS
1	0.710	100.000	0.000	0.000	0.000	0.000	0.000
2	0.963	93.432	0.365	1.166	3.580	0.893	0.560
3	1.108	79.629	1.518	1.299	3.883	12.860	0.808
4	1.237	64.118	1.920	6.622	4.901	21.548	0.888

5	1.419	52.170	1.920	12.802	4.639	27.610	0.857
6	1.569	47.170	1.632	16.184	5.686	28.587	0.738
7	1.672	45.342	2.246	16.957	7.828	26.963	0.661
8	1.733	44.751	3.042	16.412	9.860	25.316	0.616
9	1.767	44.533	3.607	15.789	11.113	24.356	0.598
10	1.786	44.290	3.848	15.762	11.572	23.930	0.594

Source: Authors' Computation

Table 8b: Variance Decomposition of Monetary Policy proxied by Interest Rate (INT)

Period	S.E.	FIS	INT	EXR	LCRT	FID	PRS
1	2.355	0.686	99.313	0.000	0.000	0.000	0.000
2	2.635	1.826	82.147	0.155	5.031	8.134	2.704
3	2.732	2.278	78.971	0.264	4.854	9.737	3.893
4	3.080	1.794	68.482	0.452	15.984	8.359	4.927
5	3.255	3.884	61.754	0.473	20.214	9.191	4.482
6	3.378	6.160	61.648	0.576	18.772	8.571	4.270
7	3.432	6.719	61.160	0.962	18.688	8.329	4.139
8	3.455	6.634	60.500	1.523	18.918	8.329	4.093
9	3.498	6.855	59.116	2.039	19.365	8.571	4.050
10	3.546	7.792	57.532	2.391	19.668	8.673	3.941

Source: Authors' Computation

Table 8c: Variance Decomposition of Monetary Policy proxied by Exchange Rate (EXR)

Period	S.E.	FIS	INT	EXR	LCRT	FID	PRS
1	17.856	4.109	0.515	95.375	0.000	0.000	0.000
2	23.663	5.596	0.317	90.996	0.464	2.506	0.118
3	25.855	6.177	0.918	87.261	2.071	3.051	0.519
4	27.196	7.208	2.135	80.781	5.336	3.359	1.178
5	27.689	9.075	2.113	77.979	6.146	3.484	1.200
6	28.062	10.004	2.487	76.199	6.731	3.393	1.183
7	28.921	9.426	2.452	72.695	10.944	3.357	1.122
8	30.254	9.561	2.382	67.582	16.275	3.159	1.038

9	31.937	11.476	2.753	61.418	20.545	2.858	0.947
10	33.552	14.286	3.527	55.915	22.776	2.634	0.858

Source: Authors' Computation

Table 8d: Variance Decomposition of Monetary Policy proxied by Credit Channel (CRT)

Period	S.E.	FIS	INT	EXR	LCRT	FID	PRS
1	0.177	15.270	14.405	0.165	70.158	0.000	0.000
2	0.266	27.846	13.429	1.145	56.966	0.576	0.035
3	0.336	31.134	13.188	1.0461	52.731	1.826	0.072
4	0.385	31.608	16.031	0.825	46.893	4.513	0.127
5	0.416	30.265	17.165	1.456	43.742	7.255	0.115
6	0.443	27.692	17.721	2.824	40.956	10.699	0.106
7	0.468	25.070	19.052	4.270	37.721	13.788	0.096
8	0.489	22.957	20.920	5.361	34.854	15.817	0.088
9	0.507	21.418	22.701	5.932	32.743	17.121	0.082
10	0.521	20.256	24.410	6.041	31.220	17.993	0.078

Source: Authors' Computation

Discussion of findings

The insights provided based on the results of the analysis in this study are very useful for monetary policy formulation with respect to the channels of monetary policy transmission to stability in the financial sector in Nigeria. The descriptive characteristics of data showed a good level of consistency in the data employed in the study while the correlation matrix indicated that a reasonable proportion of financial stability were explained by monetary policy variables. The results of the unit root tests showed that all variables were stationary at first difference. Thus, the application of VAR model to examine the channel of monetary policy transmission to financial stability; and to investigate the causal relationship between the channels (monetary policy variables) and financial stability (FIS) in Nigeria was justifiable given numerous advantages of this method.

Moreover, in the appraisal of the of monetary policy, it was discovered that the SAP period was characterized by deregulation and economic liberalization such that both interest and exchange rates were market determined, as opposed to the periods before the adoption of SAP in 1986, in which the economic environment and monetary policy before 1986 was characterized by the dominance of the oil sector, the expanding role of the public sector and overdependence on the external sector. During this period, interest rate and exchange rate were controlled and kept low often below the market determined rate. Unfortunately, developments after SAP showed that interest rate has been very high and unstable while exchange rate in relation to other major currencies in the world like US Dollars, Euro, Great Britain Pounds has continued to fall below appreciable level. These affected the level of funds available for credit to private sectors and the general welfare of the economy. They consequently affected financial stability and other macroeconomic aggregates. Also, the success of market liberalization has been constrained by frequent

change in governments and regimes which resulted in policy reversals and inconsistencies, various economic reforms, weak institutions. However, limited credits were available to private sectors from where major investments could be made that would have improved the level of macroeconomic variables before the adoption of SAP. But, with the impact of financial reform through the implementation of SAP, there was a rapid increase in credit to private sector as a result of the SAP policies which ensured the removal of credit ceiling, exchange rate and interest rate liberalization coupled with development in the financial sector as a result of bank consolidation policy in 2000s.

Moreover, considering causal relationship between the monetary policy channels and financial stability, the results showed that only exchange rate channel of monetary policy transmission caused financial stability. This also supported the results of impulse-response and variance decomposition analyses which stated that exchange rate is the dominant channel of transmission of monetary policy to financial stability in Nigeria. Also, the result showed that interest rate channel and credit channel (proxied by credits to private sectors) did not cause financial stability. The results of Granger causality showed that financial stability did not cause monetary policy (interest rate, exchange rate or credit to private sector). Hence, the study concludes that exchange rate is the only dominant channel of transmission of monetary policy to financial stability in Nigeria for the period under study.

Furthermore, the results of impulse-response analysis and variance decomposition showed that exchange rate channel was a dominant channel of monetary policy transmission in Nigeria as far as financial stability is concerned in Nigeria. However, interest rate channel and credit channel also played some part in transmitting monetary policy shocks to financial stability in Nigeria, especially in the long run.

Conclusion

The study investigated the relationship between monetary policy transmission channels and financial stability in Nigeria over the period 1986-2017. Findings of the study have given an in-depth insight and clearer understanding of the relationships among the variables. The study concluded that the appraisal of various monetary policy transmission channel indicated that interest and exchange rate liberalization as a result of market liberalization after the adoption of SAP in 1986 could not achieve financial stability due to frequent change in policies and policy reversal that ensued through changes in governments in Nigeria. The results based on VAR Granger Causality or Block Exogeneity Wald Tests, impulse-response analysis and variance decomposition showed that exchange rate channel was the dominant channel of monetary policy transmission to ensure financial stability in Nigeria. There appeared to exist a unidirectional causality running from exchange rate channel of monetary policy to financial stability.

The study therefore recommends as follows: First, the study echoes the importance of monetary policies as insulators to achieve financial stability in Nigeria; and suggests that financial stability is susceptible to shocks in monetary policy especially exchange rate, since exchange rate channel remains a dominant channel in both the short and long run. The study therefore recommends that Nigerian policymakers should ensure financial stability by creating an enabling environment through a number of monetary and fiscal policies to promote stable exchange rate such that sound financial sectors will ensure availability of institutional credits to the people at favourable rate of interest. Policy action should be put in place to effectively harness this key channel to stimulate the financial sector of the economy and boost economic activities in the real sector. It is therefore important that the monetary authorities consider exchange rate as a major channel for monetary policy implementations. Secondly, the finding that interest rate channel of monetary policy has not been effective to stimulate financial stability echoes the need for monetary policy makers to embark on further financial reforms that will make the rates of interest charged by banks and other financial institutions favourable to businesses. This will restore investors' confidence and be more committed to financial transactions from where financial stability could be achieved. Third, in line with the findings from the study which indicates that the financial development has a positive impact on financial stability in Nigeria. It is recommended that the government and monetary authorities especially the Central Bank of Nigeria (CBN) should give high priority to developing financial sector. Thus, policies that would

stimulate banks and other financial institutions need to be put in place to ensure financial stability. Lastly, sequence to the findings that credit to private sector (credit channel) has minimal effect on financial stability, government and monetary authorities should regulate the commercial banks' credit to private sectors and ensure that these credits are channeled to productive sectors in the economy. This will enable credits to private sector to achieve the desired outcome such as financial stability.

The essence of financial stability is to enhance growth and development of an economy. Therefore, this present study left a vacuum in the literature, which is to investigate the effect of financial stability on economic growth. This area has not been empirically investigated in the literature especially in the case of Nigeria.

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