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In this section, we examined the effect of some selected macroeconomic variables<sup>4</sup> as they explained the volatility of exchange rate in these countries. Consequently, the results are presented in tables 8 and 9. Table 7 presents the results by examining the effect on the behaviour or mean of exchange rate in these countries while table 8 presents the results analyzing the effect on the variance or volatility of exchange rate. From table 8, the results showed that real uncertainty as proxy for output growth volatility and inflation rate had negative impact on exchange rate behaviour in Nigeria, though it was not significant but money supply was found to positively and significantly impact exchange rate behaviour. This is not surprising as volatile output growth impacts exchange rate through the output gap channel, especially for an import surplus country like Nigeria. Inflation rate also had such effect because higher prices discourage export and thereby result in trade deficit that affect the foreign reserve, which invariably affects the exchange rate. Also, expansionary monetary policy results in income increase that facilitates more importation and capital outflow for an import dependent economy like Nigeria, and this affects the exchange rate. For Guinea, inflation rate and output growth volatility were found to positively impact exchange rate behaviour but money supply had a negative impact though not significant. This reason is not far fetch as Guinea's economy is more diversified than Nigeria's in terms of their export bases. For Gambia, inflation and money supply impacted positively on exchange rate behaviour but output growth volatility had a negative impact explaining the fact that expansionary monetary policy facilitates domestic production via investment, thereby impacting exchange rate through exports, even as higher prices encourage more investment. For Sierra-Leone, all the selected macroeconomic variables positively influenced exchange rate, explaining import substitution effect from domestic production that is boosted by higher prices and money supply.

**Table 8: Results on Exchange Rate Behaviour Determination**

Volatility	NIGERIA	GUINEA	GAMBIA	SIERRA-LOENE
	Mean Equation	Mean Equation	Mean Equation	Mean Equation
	Coefficient	Coefficient	Coefficient	Coefficient
C	0.31	3.01**	0.01***	0.001
d(exr(-1))	-0.001	0.73**	0.29**	0.69**
CPINF	-0.02	4.03**	0.02**	0.01**
M2	-0.001**	-0.001	0.03	0.01
RGDPGR	-0.14	0.094	-0.001	-0.02**
	Variance Equation	Variance Equation	Variance Equation	Variance Equation
C	5.60	229.60**	0.001**	9.93E-06**
ARCH(-1)	-0.003	2.19**	0.35**	0.48**
GARCH(-1)	0.58	0.19**	0.78**	0.87**
Adjusted R <sup>2</sup>	0.67	0.68	0.73	0.82
Durbin Watson	1.87	1.95	2.60	2.18

Notes: The asymptotic critical values of Augmented Dickey-Fuller unit root tests are in their respective levels of significance. \*\*\* (\*\*\*) denotes the rejection of the null hypothesis at 1%(5%) significance level

Source: Authors' computation

<sup>4</sup> Variables selection is guided by the empirical literature and availability.









