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# Urban Food Price Volatility and Exchange Rate Volatility Nexus in Nigeria

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## Abstract
*The Central Bank of Nigeria has expressed concerns about the foreign exchange spending on imported food items that could be manufactured locally. Therefore, the CBN has excluded a number of items from the Nigerian foreign exchange market, and introduced a number of interventions focusing on agricultural sector. These include the Anchor Borrowers Programme (ABP), which aims at reducing food import as a means of foreign exchange conservation. This study investigates urban food price volatility spillover to exchange rate volatility in Nigeria. This objective was achieved through a two-step methodological procedure. In the first step, a Multivariate Generalize Autoregressive Heteroscedasticity (MGARCH) was estimated to analyse the volatility spillover between the markets and, in the second step, a Vector Autoregressive (VAR) models was estimated using the volatilities measures estimated in the first step. The data used was monthly, from November 2015 to January 2019. The MGARCH result reveals a strong volatility spillover from urban food price to the Nigeria foreign exchange market, reflecting high interconnectivity between these markets. The estimates obtained from the VAR model also confirmed that exchange rate volatility responds positively to shocks in both urban food price and money supply volatilities. Overall, this paper concludes that the results present evidence of volatility spillovers from urban food price and money growth volatilities to exchange rate volatility. Therefore, a key policy implication of this finding is to maintaining monetary growth stability by the monetary authorities, achieving commodity market stability, especially food could be an effective means of achieving exchange rate stability.*

**Keywords: Exchange Rate Volatility, Spillover Effect, Urban Food Price Volatility**
**JEL Classification Codes: C3, F31, Q11**

## 1. Introduction

During the 2007-2008 global food crisis, developing countries that heavily depended on the importation of food (processed and intermediate) and other agricultural products, had experienced severe economic instability. This instability was because of high prices and fear of scarcity. After the crisis (2007-2008), there was the return of food spike between 2010 and 2011. This gradual rise in food price volatility has attracted the attention of researchers to the unpredictable nature of food prices (Boto & Lopes, 2011; Shittu, Akerele, & Haile, 2017). The resultant unanticipated and high price variation of commodities has a significant consequence on the level of uncertainty in the economy. These concerns are on both the micro and macro levels of the economy, which increase risks for producers, traders, consumers, budgets, inflation and government (Boto & Lopes, 2011; Deason, Laborde, & Torero, 2014).

The studies of Roache, 2010; Catao & Chang, 2013; Katusiime, 2019, have shown that developing countries that depend primarily on primary commodities (food) for foreign exchange are likely to experience significant deterioration in their term of trade due to external shocks. This is because food production is a dynamic sector that displays a fast pass-through from inputs price shocks to final prices, leading to high price uncertainty. This often creates to macroeconomic instability especially, that of exchange rate, balance of payment deficit, and decline of foreign reserve.

More specifically, in developing countries where imported food is a significant share of the consumption basket, and where domestic food production requires imported input such as chemical fertilizers, insecticides and improved seeds, food market (food price) volatility and foreign exchange market (exchange rate) volatility can be strongly linked. In addition, because primary commodity prices are generally more volatile and persistent (Ayres, Hevia, & Nicolini, 2017), volatilities in food prices that induces to volatilities in the exchange rates could affect the economy in several ways. For instance, high exchange rate volatility increases the level of uncertainty, which has significant effects on the risk-taking behavior of firms, especially those with foreign financial obligations, as well as the pricing behaviors of their products.

According to Ikuemonisan, Ajibefun, and Mafimisebi (2018), the major challenge confronting the Nigerian forex market is the high rate of importation especially, of food products. The Central Bank of Nigeria [CBN], 2016) introduced a number of interventions focusing on the agricultural sector. These interventions include the Anchor Borrowers Programme (ABP), This intervention is premised on the assumption that there is a strong spillover of volatilities between the commodity market (i.e., food or agricultural commodities) and the foreign exchange market. In

Nigeria, there are theoretically plausible channels through which this volatility spillover can happen. The periods of shortages and rising prices in the market may be followed by increased import demand for agricultural output (food) and inputs (fertilizers and herbicides); this can exert depreciating pressure in the forex market. The instabilities in the food market can cause fluctuations in the foreign exchange market. In general, the domestic food price volatility spillover to the forex market causing exchange rate volatility, consequently these triggers other interconnected macroeconomic imbalances. Therefore, it is important to understand the empirical nature of food price volatility spillover on exchange rate volatility in Nigeria.

## 2. Empirical Literature

Several studies have been conducted on food price volatility spillovers to exchange rate volatility. These studies have provided estimates that served as important input for policy because volatility spillovers have a huge consequence on macroeconomic stability. For instance, Akanni (2019) evaluate the modeling of returns and volatility connectedness between food prices and exchange rate in Nigeria (2012-2019) using Vector Autoregressive Model. The study found evidence of interconnectedness between the exchange rate returns and volatility of food prices. The spillovers from exchange rates suggest that fluctuations in exchange rates can fuel high volatility in food prices. The study recommends that monetary authoritities focus on stabilize exchange rate to control price fluctuation.

Similarly, Ikuemonisan *et al.*, (2018) investigate food price volatility effect of exchange rate volatility in Nigeria (2009 - 2016) using Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH) model. The study found out the degree of dependence of food price fluctuations on forex market uncertainty in Nigeria and find evidence of leverage effect as well as strong persistence. Specifically, it reveals that exchange rate volatility influences the volatility of the food prices. However, the effect is more pronounced on the volatility of the imported component of consumer price index returns. The study recommends that government should implement stabilization policy in the forex market as a precursor to ensure stability in the domestic food market.

Katusiime (2019) also investigates spillover effects between foreign exchange rate volatility and commodity price volatility in Uganda using Multivariate Generalized Autoregressive Conditional Heteroscedasticity (MGARCH) analysis. The study finds weak volatility spillover from the commodity market through the food price index volatility to the foreign exchange market. It furthermore indicates that the presence of spillover

effects on the foreign exchange market in Uganda was stronger during times of crisis. The study recommends that policy makers should adopt reveune stabilization fund to minimize exchange rate volatility.

Furthermore, In Nigeria, Shittu *et al.,* (2017) examine food price spikes and volatility in local food markets in Nigeria between the periods (2001-2016) using a Generalized Method of Moment (GMM) approach. The study found that rise in food prices is closely linked to spikes in the food market in Nigeria than food price volatility. The study recommends that policy makers focus on management of monetary policy including exchange rates, ensuring petrol price stability, limiting food production instability to address short and medium food price upsurges.

Also, Ayres *et al.,* (2017) evaluate real exchange rates and primary commodity prices (1960-2014) using Ricardian model, that fluctuations in primary commodity prices may explain the substantial real exchange-rate movements in the United States and United Kingdom, Germany and Japan. The study reported that both sets of variables (petroleum, fish, meat, aluminum and copper) are volatile and consistent, but between one-third to one-half of the volatility of the real exchange rates between the United States and those countries can account for four primary commodity prices. The study reported that both sets of variables are volatile and very persistent but the four primary commodity prices is more volatile than real exchange rates. The study recommends monetary policy should be put in place to address price stability.

These reviewed studies, however, focused on the aggregate food price (composite) and not on the components of the aggregate food price. Hence, this study sets out to fill this gap identified by estimating the magnitude of urban food price volatility spillover to exchange rate volatility as well as evaluating its speed and direction.

## 3. Methods and Data

The study used monthly data spanning 2015M11-2019M12 to analyze spillovers from urban food price volatility to exchange rate volatility. The variables of interest are real exchange rate, urban food prices, and money supply obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin. The study applied logarithmic transformation for the monthly data for each series examined in the study defined as $r_t = 100 * (\Delta \log(p_t))$.Where $r_t$ measures the monthly depreciation/appreciation of the Naira exchange rate, urban food inflation, and monthly growth of the money supply. While $\Delta$ denotes the first difference lag operator.

This study examines volatility spillovers between urban food and foreign exchange market using Multivariate Generalized Autoregressive

Conditional Heteroscedasticity (MGARCH) models and Vector Autoregressive framework (VAR).The Multivariate GARCH estimates provide measure of the volatility and spillover among the variables using conditional correlation, variance and covariance equations. The MGARCH model is generally flexible and enables the determination of volatility and co-volatility (spillover) between the two markets. It also measures the extent to which volatility of an asset is transmitted to another asset either directly or indirectly through conditional correlation i.e., conditional variance and covariance (Bauwens, Laurent, & Rombouts, 2006). The (MGARCH) model is into two variants: the constant conditional correlations (CCC) model, which assumes that co-volatilities between markets are unchanged over time, where all conditional correlations are constant. The conditional variances are based on univariate GARCH models (Bollerslev, 1990). However, Dynamic Conditional Correlation (DCC) has a time-dependent component that allows interaction between conditional variance and conditional covariance. Since market volatility may not always be constant over time but time-varying, the restricted CCC can accommodate a time-varying component within its conditional correlation definition. It makes the Intermarket co-volatilities dynamic (Engle, 2002). Thus, the MGARCH model is specified as:

$$EX_t = \alpha_0 + \sum_{i=1}^{n} \alpha_1 \, FP_{t-n} + \beta M2_t + \sum_{s=1} \Theta \, \varepsilon_{u,t} \quad (1)$$

$$Var(EX_t|I_{t-1}) = H_{u,t}^{\frac{1}{2}} Var(\xi_t|I_{t-1}) H_{u,t}^{\frac{1^{\mathrm{I}}}{2}} = H_{u,t} \quad (2)$$

Where $EX_t$ is an m × 1 vector of dependent variable; $M2_t$ is the vector of (money supply) and $UFP_t$ is a k × 1 vector of independent variables. The $\varepsilon_t$ are the error terms with conditional means of zero and independent & identically distributed innovations; the conditional covariance matrix is given by a positive definite N × N matrix $H_t$. While, $\alpha, \Theta, H_t, \beta$ are unknown parameters to be estimated. The Conditional Correlation equation, which captures the correlation between the volatilities of food and exchange rate, can be set up as:

$$H_t = \theta_{et}\sqrt{V_{et}V_{ft}} \quad (3)$$

Where $V_{et}$ *and* $V_{ft}$ are the conditional variances of foreign exchange market (*e)* and food market (*f)* and $\theta_{et}$ is a conditional correlation vector of the positive definite coefficient that could either be symmetric or asymmetric.

The Dynamic Conditional Correction (DCC) can be shown as:

$$\psi_t = (1 - \omega_1 - \omega_2)\bar{\psi} + \omega_1 \mu_{t-1}\mu'_{t-1} + \omega_2 \psi_{t-1} \quad (4)$$

Where $\psi_t$ and $\bar{\psi}$ are symmetric $q \times q$ positive definite parameters metrics and N×N correction metric of $\mu_t$ with the restriction that $0 < \omega_1$

and $\omega_2 < 1$(Bauwens *et al.*, 2006). Secondly, to evaluate the extent of the spillover effect between the two markets, a VAR model is employed. Thus, the generalized VAR framework is specified as;

$x_t = \Phi_0 + \sum_{i=1}^{p} \Phi_i x_{t-1} + \epsilon_t$ (5)

Where $x_t$ are vector of elements $EX_t$ , $FP_t$ and $MS_t$ volatilities and its lagged values and, $\Phi_i$ is a $2 \times 2$ parameter matrix of the unknown coefficient, $\beta_1, \alpha_2$ and $\theta_3$ are constant ad $\varepsilon_{it} \sim (0, \Omega)$ is $k \times 1$ vector of disturbance and white noise (Brooks, 2014).

## 4. Results and Discussion

**Table 1: Descriptive Statistics Results**

| Variables | Mean | Std.Dev. | Min | Max | Skewness | Kurtosis | Jarque-Bera |
|---|---|---|---|---|---|---|---|
| EXR | 87.338 | 11.71732 | 62.15 | 107.35 | -0.5247 | 2.632 | 2.5767 (0.275725) |
| UFP | 258.428 | 47.89547 | 181.54 | 344.87 | 0.0572 | 1.859 | 2.738545 (0.25429) |
| MS | 239911 | 2699995. | 183672 | 291378 | 0.1722 | 2.005 | 2.311457 (0.31482) |
| No of obs | 50 | 50 | 50 | 50 | 50 | 50 | 50 |

Source: Authors' Computation

Table 1 shows that the standard deviation of exchange rate is lower compared to that urban food prices and money supply. Thus, indicating that prices in commodity (urban food) market and money supply growth are more volatile than the foreign exchange market. The results further indicate that some variables are normally distribution (zero skewed); the distribution is symmetric around its mean. The exchange rate a negative skewed distribution, implying a long tail on the left with lower values. The kurtosis result reveals that all the variables are platykurtic. Furthermore, the Jarque-Bera test indicates that the series is normally distributed based on the probability value greater than 0.05 level.

**Table 2: Unit Root Test Results**

| | **AT LEVELS** | | | | **REMARKS** | **FIRST DIFFERENCES** | | | | **REMARKS** |
|---|---|---|---|---|---|---|---|---|---|---|
| VARIABLES | ADF stat | 1% | 5% | 10% | | ADF stat | 1% | 5% | 10% | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| EXR | -3.173* | -3.571 | -2.922 | -2.599 | [I(0)] | -4.843* | -3.577 | -2.925 | -2.600 | [I(1)] |
| UFP | 0.4924 | -3.581 | -2.926 | -2.601 | [I(0)] | -3.375* | -3.581 | -2.962 | -2.601 | [I(1)] |
| MS | -1.019 | -3.571 | -2.922 | -2.599 | [I(0)] | -9.327* | -3.574 | -2.923 | -2.599 | [I(1)] |
| | | At Levels | | | Remarks | | First Differences | | | Remarks |
| VARIABLES | Philips-perron | 1% | 5% | 10% | | Philips-perron | 1% | 5% | 10% | |
| EXR | -3.128* | -3.571 | -2.922 | -2.599 | [I(0)] | -4.973* | -3.574 | -2.923 | -2.599 | [I(1)] |
| UFP | 1.198 | -3.571 | -2.922 | -2.599 | [I(0)] | -3.284* | -3.574 | -2.923 | -2.599 | [I(1)] |
| MS | -0.953 | -3.571 | -2.922 | -2.599 | [I(0)] | -9.571* | -3.574 | -2.923 | -2.955 | [I(1)] |

Source: Authors' Computation

Table 2 shows that the ADF and Phillips-Perron (PP) tests showing that urban food prices and money supply are stationary at first differences I(1), with the exception of exchange rate. The exchange rate is stationary at both level I(0) and first differences I(1), that is, there is no unit root for all the variables. Therefore, (*) indicate rejection of the null hypothesis ($H_0$) at 1%, 5%, and 10% level of significance respectively.

**Table 3: Returns Correlation and ARCH Effect**

| Returns Correlation | |
|---|---|
| Ljund-Box(24) Q-stat | 25.501(0.379) |
| Heteroscedasticity Test | |
| ARCH Effect(1) | 10.95484 (0.0009) |

*,**,*** represent statistical significant level of 1%,5%,10%
Source: Authors' Computation

From table 3, there is the presence of ARCH effect as the probability value is less than 5%. Hence, the null hypothesis is rejected. The result further reveals that there is a strong and positive relationship as well as high variation among the variables.

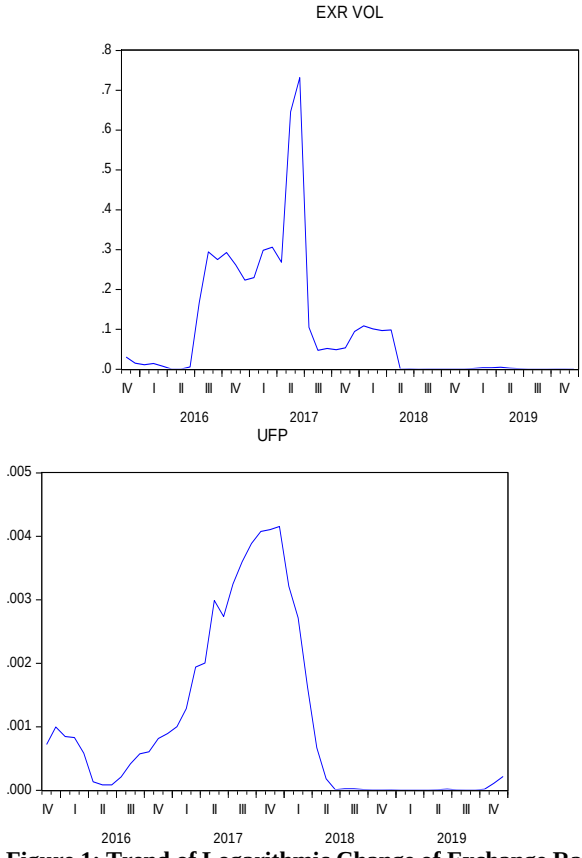



**Figure 1: Trend of Logarithmic Change of Exchange Rate, Urban Food Price**
Source: Authors' Computation

Figure 1 shows the exchange rate and urban food price trend. In2016, the series' movement took on a new shape due to the recession and the depreciation of Naira. The exchange rate demonstrates a significant level of volatility within 2017M05 and 2018M03, then a flattening trend for the rest of the years. The flattening trend can be attributed to border closure to avoid smuggling goods (such as food, fertilizer, and herbicide) which relates to the stability in the foreign exchange market (CBN, 2019).For the urban food price, the period 2017M07 is more volatile due to the country's persistent and negative macroeconomic situation which includes insurgency, high commodity prices, and the disruptive effect of farmer-herdsman clashes, all of which are likely to feed higher domestic prices and devaluation of the Naira ( CBN, 2017). From2018M04 to 2019M12, urban food prices start to declines becoming stable. This is due to the closure of

the border to address the increased issues of cross-border banditry, smuggling and dumping, insurgency, and the illegal trade practices of neighboring countries (CBN, 2019).

**Table 4: Estimated coefficient for the Mean and Variance Equations of Exchange Rate**

| DCC | | |
|---|---|---|
| Variables | Coefficient | p-value |
| | | Means Equations |
| UFP | 4.092452 | 0.0000 |
| MS | 0.239595 | 0.0000 |
| **Variance equations (ARCH)(1) Result** | | |
| EXRR | .8374634 | 0.000 |
| UFP | 1.632595 | 0.001 |
| MS | .9580568 | 0.000 |
| **GARCH (1)** | | |
| EXRR | -.076213 | 0.000 |
| UFP | -.1864616 | 0.585 |
| MS | -.3216165 | 0.020 |
| AIC | -352.2167 | |
| BIC | -325.4483 | |
| Log likelihood | 190.1083 | |

Note.*, **, *** indicated at least significant at 1%, 5% and 10% levels, respectively.
Source: Authors' Computation

Table 4 reports the results for the mean and variance equation for each market. The mean equation reveals that all the variables are significant at 5% and positive impact on the exchange rate. This means that an increase in urban food prices and money growth increase the level of exchange rate, leading to the depreciation of the exchange rate in Nigeria.The variance equation results reveal that individualize ARCH effects are significant at 5% level for the variables in the models. These results indicate that only the short-term volatility persistence of the urban food price and money growth influences exchange rate volatility in Nigeria. Furthermore, these imply that an increase in volatility of urban food prices increases the exchange rate volatility.

**Table 5: Estimated coefficient for Covariance Equations of Exchange Rate**

| | **DCC model 1** | |
|---|---|---|
| **Variables** | **Coefficient** | **p-value** |
| Corr (EXRR, UFP) | -0.9367132 | 0.000 |
| Corr (EXRR, MS) | -0.8622374 | 0.000 |
| Corr (UFP, MS) | 0.8556672 | 0.000 |
| $\theta_{ufp1}$ | 0.4042207 | 0.000 |
| $\theta_{ufp2}$ | 0.5568134 | 0.000 |

Source: Authors' Computation

Table 5 shows the results for the Dynamic Conditional Correlation (DCC) (i.e., covariance equation). The level of conditional correlation between the two markets is statistically significant at 5%, strong and negative in the model estimated. Thus, the DCC models reveal a high and negative correlation between the urban food market and the foreign exchange market. This implies strong volatility spillovers from the commodity market through urban food price volatility to the Nigeria foreign exchange market. The strong conditional correlation between the exchange rate volatility and urban food price volatility reflects the high interconnectivity between these markets.

For the urban food prices and exchange rate, table 5 shows that there is a strong positive relationship. That is, an increase in urban food prices results in an increase in exchange rate volatility. The result also reveals that the strength of the spillover varied over the time period as the dynamic conditional correlations (DCC) model is found to be statistically significant at 5%. The estimated parameters for urban food price (0.404 + 0.557= 0.961) show that the volatility exhibits a highly persistent behavior as the sum to a value close to one. Hence, since the sum value is less than one, it indicates the dynamic conditional correlations are mean-reverting (Katusiime, 2019). The magnitudes of parameters $\theta_1$ and $\theta_2$ show that the shock in the long-run (see coefficients for $\theta_2$ in the model) is persistent and has a greater impact compared to the short-run (see coefficients for $\theta_1$ in the model). This suggests that the volatility in urban food prices is highly persistent and have a long-term shock impact on exchange rate volatility in Nigeria. The significance of the estimated parameters in the DCC models indicates that conditional correlations are highly dynamic and time-dependent. This means that the assumptions of constant conditional correlation (CCC) are too restrictive for the data, which is consistent with the evidence observed in the literature ( Katusiime, 2019). The chosen DCC models are the two MGARCH models, which consistently have the lowest estimated coefficients for the AIC and BIC criteria.

## 4.1 Post-estimation Tests

The post- estimation test results conducted indicate that the models are well specified (Table 6). That is, there is no evidence of ARCH effects in the estimated MGARCH model. The standardized residuals (Q-statics2) display that no statistically significant evidence of serial autocorrelation. Thus, the dynamics captured in the model are adequate.

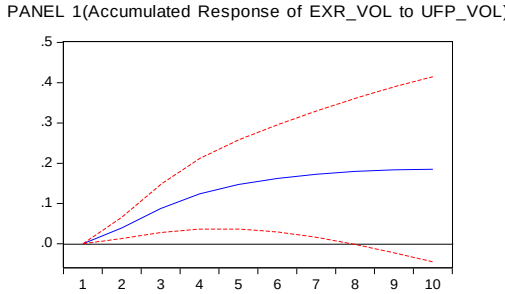
**Table 6: Returns Correlation and ARCH Effect**

| | |
|---|---|
| Returns Correlation | |
| Ljund-Box (24) Q-stat$^2$ | 12.545(0.973) |
| Heteroscedasticity Test | |
| ARCH Effect (1) | 1.539639 (0.2147) |
| Normality Test | |
| Jarque-Bera | 3.618942 (0.1637) |

*,**,*** represent statistical significant level of 1%,5%,10%
Source: Authors' Computation

## 4.2 Impulse Response Analysis

Accumulated Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.




Accumulated Response to Cholesky One S.D. (d.f. adjusted) Innovations ± 2 S.E.

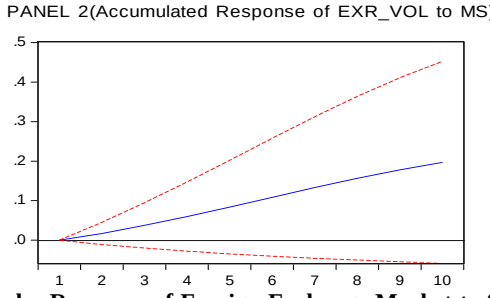



**Figure 2: Impulse Response of Foreign Exchange Market to Shock Urban Food Price and Money Growth**
Source: Authors' Computation

This Impulse Response analysis estimated from an unrestricted VAR model of the volatilities estimated from the GARCH model. Diagnostic tests on the VAR, shown in Table 8, reveal that the model is correctly specified: there is no evidence of ARCH effects, the residuals are normal according to the Jarque-Bera test and the Lagrange-multiplier test shows no evidence of serial autocorrelation. The VAR also satisfies the eigenvalue stability condition. Thus, the dynamics captured in the model are adequate. Figure 2 shows the response of exchange rate volatility to one standard deviation shock to urban food price and money supply volatilities (Panel 1 & 2). As shown in Panel 1, exchange rate volatility rises in response to a Cholesky one standard deviation shock to urban food price volatility. The magnitude of the response rises to reach its maximum after the 8$^{th}$ month of the shock. Panel 2 shows that, in response to a similar shock to money supply volatility, exchange rate volatility rises steadily up to beyond the 9$^{th}$ month. This indicates that when volatilities in urban food price and money supply increase, the exchange rate volatility also increases, implying presence of significant volatility spillover effects running from commodity (urban food) and money markets to the Nigeria's foreign exchange market.

### 4.3 Granger Causality Test Result

**Table 7: Granger Causality Test Results for the Direction of Spillovers**

| **Dependent variable: EXR** | | | |
|---|---|---|---|
| Excluded | Chi-sq $x^2$ | Df | Prob. |
| UFP | 6.9397 | 3 | (0.074) |
| MS | 5.0349 | 3 | (0.169) |
| All | 9.4549 | 6 | (0.149) |
| **Dependent variable: UFP** | | | |
| Excluded | Chi-sq $x^2$ | Df | Prob. |
| EXR | 11.1638 | 3 | (0.011) |
| MS | 2.4915 | 3 | (0.477) |
| All | 15.6373 | 6 | (0.016) |
| **Dependent variable: MS** | | | |
| Excluded | Chi-sq $x^2$ | Df | Prob. |
| EXR | 0.9908 | 3 | (0.804) |
| UFP | 3.6364 | 3 | (0.304) |
| All | 8.6946 | 6 | (0.192) |

Source: Authors' Computation

Table 7 reports granger causality test results for the detection of the direction of the spillovers from one variable to another. The results show that while money supply volatility does not granger-cause exchange rate volatility at the 5% significance level, urban food price volatility does granger-cause exchange rate volatility at 10%. In addition, exchange rate volatility Granger-causes urban food price volatility indicates a bi-directional causality at the 10% level of significance, or uni-directional

causality running from exchange rate to food prices at the 5% level of significance.

**Table 8: Returns Correlation and Stability Test**

| | |
|---|---|
| Returns Correlation | |
| Lagrange-multiplier test (8) | 10.4014 (0.31898)** |
| Stability Test | |
| Eigenvalue stability condition | -.294772 (.294772) |
| Normality Test | |
| Jarque-Bera | 379.988 (0.00000)** |

*,**,*** represent statistical significant level of 1%,5%,10%
Source: Authors' Computation

## 5. Conclusion and Recommendations

This study analyzes the spillovers of urban food prices volatility to exchange rate volatility in Nigeria. This objective was achieved using Multivariate GARCH and VAR models for the estimation of the level and the extent of volatility spillovers between two markets. Findings from the Multivariate GARCH model show a strong volatility spillover from urban food price volatility to the Nigeria foreign exchange market. This strong conditional correlation between the exchange rate volatility and urban food price volatility reflects the high interconnectivity between these markets studied.

Finally, estimates from the VAR model show that exchange rate volatility responds positively to shocks to urban food price and money supply volatilities. The positive volatility spillovers running from urban food market to the foreign exchange market indicates that news about food prices impacts the Nigerian foreign exchange market. Therefore, this study concludes that volatility from the urban food price is a significant influence on foreign exchange market volatility. This is as a result of high importation of processed foods and increase of money supply that put pressure on exchange rate leading to depreciation of exchange rate. The study recommends that the monetary authorities should focus on achieving commodity market stability especially food price stability through the Anchor Borrowers Programme given its objective to achieve a stronger and viable agricultural base, enhance food security in order to achieve exchange rate stability and diversify the economy into agriculture, manufacturing, services, and other non-oil sectors.

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