DERIVATIVE SECURITIES AND ITS IMPACT ON THE NIGERIAN STOCK MARKET

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Abstract: This study was carried out to ascertain the impact of derivative securities on the Nigerian stock market between 2014 and 2019. Data employed for this study was elicited from Central Bank of Nigeria Statistical Bulletin of 2018 and Security and Exchange Commission statistical Bulletin of 2019. This study employed All Share Index and Market Capitalization as measure of productivity of the Nigerian stock market, while Foreign Exchange Derivative was employed as the regressor and Exchange Rate was employed as a controlled variable. This study employed Auto-Regressive Distributed Lag ARDL Model to analyze data. Inferential results pointed out that Foreign Exchange Derivative had positive impact on productivity of the Nigerian stock market within the period under review. The study recommended that monetary authorities in Nigeria should lay emphasis on the deepening of the Nigerian derivative market through the introduction and trading of derivative instruments such as swaps, options, futures and forwards amongst others as applicable in the financial systems of advanced countries. If this is done, the productivity of the Nigerian stock market would be greatly enhanced.
Keywords: Foreign Exchange Derivative, Nigerian Stock Market, All Share Index, Market Capitalization, Exchange Rate and ARDL Model.

Introduction
Background to the Study
Financial derivatives are financial securities used in hedging against risk and loss in the value of an underlying asset. Efanga, Umoh, Essien and Umoh, 2019 opined that derivatives are forms of risk management tools. Osuoha 2013 defined derivative as financial assets that gain their values from the value of other assets. The assets from which derivatives gain their values from are known as underlying assets. These underlying assets may be any financial securities, commodities, interest rate and exchange rate, amongst others. Some of the major types of derivatives include options, forwards, futures and swap. Others include caps, swaption, floors, collars and rights. In another study, Efanga et al. 2019 defined derivatives as financial assets that derive their worth from the performance of underlying assets. These underlying assets can be an asset index, exchange rate or interest rate.
Panjer 2001 in another study opined that derivatives are assets that are derived from both financial assets and real assets or from liabilities.
Derivatives transaction can be likened to a bilateral contract or an agreement involving exchange rate payment whose worth is determined by the worth of an underlying security or asset. The worth of a derivative security may be anchored on the worth of any item or instrument that holds value to the investors. These instruments may include any financial or real which are determined by market indices and the prevailing interest and exchange rates. The nature of derivatives as being highly leveraged which also involves little or no pre-payment commitment, this makes derivative them an efficient and effective instruments used in mitigating risk inherent in any economic activity (Dolapo and Oluwasolape 2019).
It is important to note that derivatives securities on their own do not have value, however, their values are predicated on the value or worth of other assets that it is used to hedge against the risk associated or

inherent in transacting with such assets. The basic and the commonest meaning of derivatives is that it that it is an instrument that derives something from something else. A common analogy of derivative is bread, which is a derivative of flour. The price of bread depends upon the price of flour, which also depends upon the demand and supply of bread (Efanga et.al, 2019).

Statement of Research Problem

Derivatives are forms of risk mitigating instruments. There have been insignificant numbers of empirical research bordering derivative and its uses and impact in the Nigerian stock market, even as derivatives securities have proved to be a reliable hedging tool as opined by many researchers whose works will be evaluated and reviewed in the literature section of this article. This may be as a result of low level of awareness of derivative products in Nigeria. Beside high transaction costs and volatile market conditions, financial institutions and investors in Nigeria are reluctant to use derivatives due to the lack of awareness about derivatives products and their benefits. This study is motivated by the zeal to create awareness and bring to limelight the impacts of financial derivatives on the performance of the Nigerian stock market and fill the gaps that have been left unattended to and also contribute to the scanty literature on derivative securities and instruments, and in doing these, contribute to knowledge on the benefit and adoption of derivatives to manage risks associated with the Nigerian stock market and enhance productivity of the stock market. This study is segmented into five parts, introduction, literature review, methodology employed, data analysis and conclusion of this study.

Research Objectives

The broad objective of this study is to ascertain the impact of derivative securities on the productivity of the Nigerian stock market, while the specific objectives are:

1. To investigate the impact of foreign exchange derivative on market capitalization in the Nigerian stock market.
2. To examine the impact foreign exchange derivative on All Share Index in the Nigerian stock market.

Research Hypotheses

1. $H0_1$: foreign exchange derivative has no significant impact on market capitalization in the Nigerian stock market.
2. $H0_2$: foreign exchange derivative has no significant impact on All Share Index in the Nigerian stock market.

Literature Review
Concepts of Derivative
An Overview of Derivative Securities

Derivatives came into limelight and gain worldwide prominence in the early 1970s due to complexity and dynamism in the various environments of business. The fluctuations and unpredictability of prices of items, interest rates and exchange rate can be traced back as far as the mid 1900s. The volatility in the market was in continuum noted from 1973 when the abandonment of exchange rate came to be in the Breton Woods System. High levels of volatility continue to persist (Nguyen and Faff 2003). In the market today, there are several derivatives exchanges around the globe trading all types of derivatives securities. In many emerging markets economies, long term plans are underway to introduce derivatives exchanges (Lien and Zhang 2008). In recent times, the derivatives market have expanded at an unprecedented pace, faster than some basic indicators of international economic development (Osaze 2011).The major constraint in the trading of derivative assets are the underdevelopment of the local derivative markets, coupled with weak or inadequate regulations and the infrastructures of the market. (Shanker 1996).

Nguyen and Faff (2003) credited risk management to have emanated from the Bible in the Old Testament. He anchored his argument on the story of the Egyptian Pharaoh that had a dream of how seven cows that were very healthy ate up seven other lean and sickly cows and also how seven healthy ears of corn ate up another seven sickly ears of corn.

Pharaoh was greatly disturbed by the dream he had, so he summoned Joseph to interpret the dream he had. Joseph interpreted that the dream meant that a severe famine was looming in the horizon. So to hedge against the imminent risk that was hovering around, Joseph advised pharaoh to hoard large quantities of grains. According to the bible's account, Egypt experienced the foretold famine, but Egypt didn't suffer food shortages, but prospered when every other nation were in severe famine, thanks to the great advice from Joseph. (Genesis 42:1-57).

Developments of Derivatives in Nigeria

The Central Bank of Nigeria in 2011 introduced the use of Foreign Exchange Derivatives in the Nigerian market through certain guidelines. Those guidelines were put in place to regulate the activities of dealers authorized to transact with foreign exchange in Nigeria regarding derivatives transactions. The approved hedging products to be traded as enshrined in the guidelines include: options; forwards and swaps. The Securities and Exchange Commission of Nigeria (SEC) are saddled with the responsibility of regulating foreign exchange derivative in Nigeria (Dolapo et. al, 2017).

Classification of Derivatives

Broadly speaking, derivatives can be categorized into two, the financial and commodity derivatives. The most common types of financial derivatives are: futures, options, swaps and forwards. While types of commodity derivatives underlying asset can be gold, silver, petroleum produce or grain, etc; but the underlying assets attributed to financial derivatives includes all known and used financial securities, such as stocks, bonds and other securities that bears interest, etc.

Types of Derivatives

The main types of derivatives (forwards, futures, options and swaps) are examined below.

Forward Contract: A forward is a contract involving two parties, where both parties agree to exchange the underlying asset at a predetermined future date at an earlier agreed date at a price that has been fixed. In this arrangement, both the buyer and the seller agree today to buy and sell a certain asset in the future at an agreed price. (Vashishtha and Kumar, 2010).

Futures Contract: A futures contract is an agreement between two parties which is made on the trading floor of a futures exchange to buy or sell an asset at a certain time in the future at a certain price.

Swaps Contract: These are agreements to exchange one series of future cash flows for another.

Options Contract: Exchange-traded options are standardised contracts whereby one party has a right to purchase something at a pre-agreed strike price at some point in the future. The right, however, is not an obligation as the buyer can allow the contract to expire and walk away.

Importance of Derivatives Securities to the Nigerian Stock Market

Derivatives securities are very reliable in mitigating and ameliorating risk associated with investment. Derivatives market makes it possible for risk transfer, the risk averse investors can transfer the risk associated with their securities to other investors who wish to take up more risk in investment with the promise of a higher return in the future. Derivatives market can benefit and improve the Nigeria stock market by assisting investors in the market hedge against risk and prevent lost of capital in the stock market, thereby enhancing the market's efficiency. Also, an efficient and effective derivative market can enhance liquidity in the Nigeria stock market by shifting of risk and futures contract or option before the expiration date at the Nigeria derivative market. Finally, a well deepened derivatives market in terms of the types and number of derivative instruments traded like the one in operation in advanced nations of the world can attract more foreign investments to the Nigeria stock market. Derivatives is not without its demerit, since derivatives are used as speculative instrument, in times where the market indices changes adversely against the forecast of financial experts, financial loss is inevitable. Just as in the case with options contracts, the party that holds the put option is obliged to adhere to it if the holder of the call chooses to exercise its right to sell or buy; if this takes place, financial loss is inevitable (Osuoha, 2013).

Empirical Review

Chanzu and Gekara (2014) in their study investigated the effects of the use of derivatives on financial performance of some selected companies listed in the Nairobi Securities Exchange (NSE), in their study;

the main objective was to determine how risk management, efficiency, price stabilization and price discovery in derivative affect the financial performance of companies in listed in NSE. The researchers adopted a descriptive research design with the use of correlation analysis to analyse the responses elicited from questionnaires. The study found out that, apart from price stabilization other variables contributed positively to the financial performance of companies listed in NSE.

In another study, Lenee and Oki (2016) investigated financial derivatives and financial and non financial firms" performance in the UK using Panel Least Square (PLS) regression. Their findings elicited from their study showed that financial firms tend to hedge more against risk associated with interest rate while non financial firms hedge more against risk inherent with foreign exchange rate. In addition, hedging interest rate risks by both groups via the use of a combination of forwards and futures derivatives was found to record a significant and positive impact on return on assets as firm performance, but had a negative effect when only swap derivatives was used.

In a similar study, Olawale (2015) investigated the impact of credit risk on the performance of commercial banks in Nigeria. The variable employed was ratio of loan and advances to total deposit, the result showed a positive and significant relationship between bank profitability and loan performance.

Similarly, Olusanmi, Uwuigbe and Uwuigbe (2015) researched on the effect of risk management on Banks financial performance in Nigeria. The researchers employed Ordinary Least Square (OLS) regression technique to test hypothesis. The findings elicited from their study revealed the existence of a negative an insignificant relationship between risk management and bank's performance.

In the same vein, Kolapo, Ayeni and Oke (2012) worked on credit risk and commercial banks' performance in Nigeria using panel model analysis. Their result revealed that the effect of credit risk had on bank performance was cross-sectional invariant. Though the degree to which individual banks are affected was not captured by the method of analysis utilized.

Furthermore, Tijani and Mathias (2013) also evaluated corporate use of derivatives and financial risk management in Nigeria using non financial firms. The study utilized multivariate analysis and logistic regression tests on SPSS version 18. The findings elicited from their study showed very low usage of derivatives. The reason was attributed to lack of awareness on the use of derivatives and the underdeveloped nature of the Nigerian financial market.

Maniar (2000) studied the Impact of Derivatives trading on the underlying Securities; A Case study on National Stock Exchange of India (NSE) of India. The study concluded that the adoption of derivatives could help to stabilize their spot markets, expanding the investment opportunity set and improving the daily market operation.

Also, Skinner (1991) researched on Options markets and stock return volatility. The study analyzed how the options market affects the volatility of the stock returns to an investor. The author indicated that the market volatilities that investors consider when pricing derivatives have an effect on the markets' expectation of the underlying asset's volatility.

Methodology

In this study, the *ex-post facto* research design is adopted. Data for this study are elicited from Central Bank of Nigeria Statistical Bulletin and Security and Exchange Commission Statistical Bulletin of 2019. The study period covers 2014 through 2019. This study used Auto Regressive Distributed Lag (ARDL) Model to ascertain the impact of derivative securities on the productivity of the Nigerian stock market. E-view 9.0 econometric statistical software package was used for the analysis.

This study adapted the economic model previously used by Efanga, et al. (2019) that analysed the impact of derivative instruments on risk management in the Nigerian banking sector. The model is reported thus:

$EXR = \beta_0 + \beta_1 FED_t + \varepsilon_t$ -- (1)

Where:

EXR = Exchange rate

FED = Foreign exchange derivative

β_0 = Intercept

β_1 = Coefficient of independent variable

ε = Error term

The model for this study in its functional form is written thus:

For hypothesis one:

MKT= f (FED, EXR, µ) …………………………………………………. (2)

 Where:

MKT = Market Capitalization

FED = Foreign Exchange Derivative

EXR = Exchange rate

µ = Error term.

The estimation technique of the above model in explicit form is transformed to a double-log model, thus becomes:

LOGMKT= α_0+ α_1LOGFED+ α_2LOGEXR + µ ……………………………….. (3)

Where:

LOG= logarithm; α_0 is the intercept, while α_1, α_2, α_3 are the coefficients and µ is the error term.

For hypothesis two:

ASI= f (FED, EXR, µ) …………………………………………………. (4)

 Where:

ASI = All Share Index

FED = Foreign Exchange Derivative

EXR = Exchange rate

µ = Error term.

The estimation technique of the above model in explicit form is transformed to a double-log model, thus becomes:

LOGASI= α_0+ α_1LOGFED+ α_2LOGEXR + µ ……………………………….. (5)

Where:

LOG= logarithm; α_0 is the intercept, while α_1, α_2, α_3 are the coefficients and µ is the error term.

A priori expectations of the model are that:

Foreign exchange derivative is expected to have a positive impact on market capitalization in the Nigerian stock market.

Foreign exchange derivative is expected to have a positive impact on All Share Index in the Nigerian stock market.

Exchange rate is expected to have a negative impact on market capitalization in the Nigerian stock market.

Exchange rate is expected to have a negative impact on All Share Index in the Nigerian stock market.

Data Analysis and Interpretation of Results

Descriptive Statistics

Table 1: Descriptive Statistics

	FED	ASI	MKT	EXR
Mean	1720.300	32247.98	12232.93	251.1257
Median	1162.400	31462.00	12657.65	254.1895
Maximum	4247.800	39404.30	13508.50	360.0000
Minimum	546.2000	26616.40	10531.60	158.5530
Std. Dev.	1457.740	4256.375	1161.579	70.77244
Skewness	0.934143	0.527170	-0.499141	0.215183
Kurtosis	2.417626	2.667877	1.717733	2.168916
Jarque-Bera	0.957414	0.305484	0.660194	0.218979
Probability	0.619584	0.858351	0.718854	0.896292
Sum	10321.80	193487.9	73397.60	1506.754

Sum Sq. Dev.	10625032	90583636	6746334.	25043.69
Observations	6	6	6	6

Source: Author's analysis using e-view 9 output

Table 1 describes the variables employed in this study. The descriptive statistics results showed that the mean of Foreign Exchange Derivative (FED), All Share Index (ASI), Market Capitalization (MKT) and Exchange Rate (EXR) were N 17.20 billion, N322.47 billion, N122.32 billion and N251.13 to a dollar respectively. The minimum of the variables; Foreign Exchange Derivative (FED), All Share Index (ASI), Market Capitalization (MKT) and Exchange Rate (EXR) N5.46 billion, N26.62 billion, N10.53 billion and N158.6 respectively. While the maximum were N4.25 billion, N39. 4 billion, N13.51 billion and N360 for Foreign Exchange Derivative (FED), All Share Index (ASI), Market Capitalization (MKT) and Exchange Rate (EXR) respectively. The standard deviation of N1457.7, N4256.4, N1161.6 and N70.8 Foreign Exchange Derivative (FED), All Share Index (ASI), Market Capitalization (MKT) and Exchange Rate (EXR) respectively. This shows that deviations from the averages of these variables signify that the variables are not fix or static, but varies year in year out. The number of observation signifies the duration of the study.

Inferential Result
Results of ARDL Model For Hypothesis One
Table 2: Results of ARDL Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(MKT(-1))	-0.686341	0.150261	-4.567657	0.1372
LOG(FED)	0.028053	0.033863	0.828441	0.5596
LOG(EXR)	0.249843	0.120294	2.076938	0.2857
C	14.25200	1.388543	10.26399	0.0618

R-squared	0.977088	Mean dependent var	9.396221
Adjusted R-squared	0.908353	S.D. dependent var	0.104116
S.E. of regression	0.031519	Akaike info criterion	-4.085864
Sum squared resid	0.000993	Schwarz criterion	-4.398314
Log likelihood	14.21466	Hannan-Quinn criter.	-4.924448
F-statistic	14.21522	Durbin-Watson stat	1.859845
Prob(F-statistic)	0.191987		

Source: Author's analysis using e-view 9 output

The ARDL Model result as shown in table 2 above suggests that Foreign Exchange Derivative had a positive impact on Market Capitalization while Exchange Rate also recorded a positive impact on Market Capitalization in Nigeria. The result further revealed that a percent increase in Foreign Exchange Derivative would bring about a 3 percent increase in Market Capitalization. Also, a percent increase in exchange rate would bring about approximately 25 percent increase in Market Capitalization and vice versa.

The Adjusted R-squared of approximately 0.91 showed that the regressors accounted for about 91% variations in the regressand. Put differently, about 91% variations in Market Capitalization were explained by Foreign Exchange Derivative and Exchange Rate, while the remaining 9% may be attributed to variables not included in the model.

Durbin-Watson stat. of approximately 1.9 suggests that the variables are free from auto-correlation since it is very close to the region of 2.

Diagnostic Test
Test for Auto Correlation
Table 3: Correlogram Q-Statistic
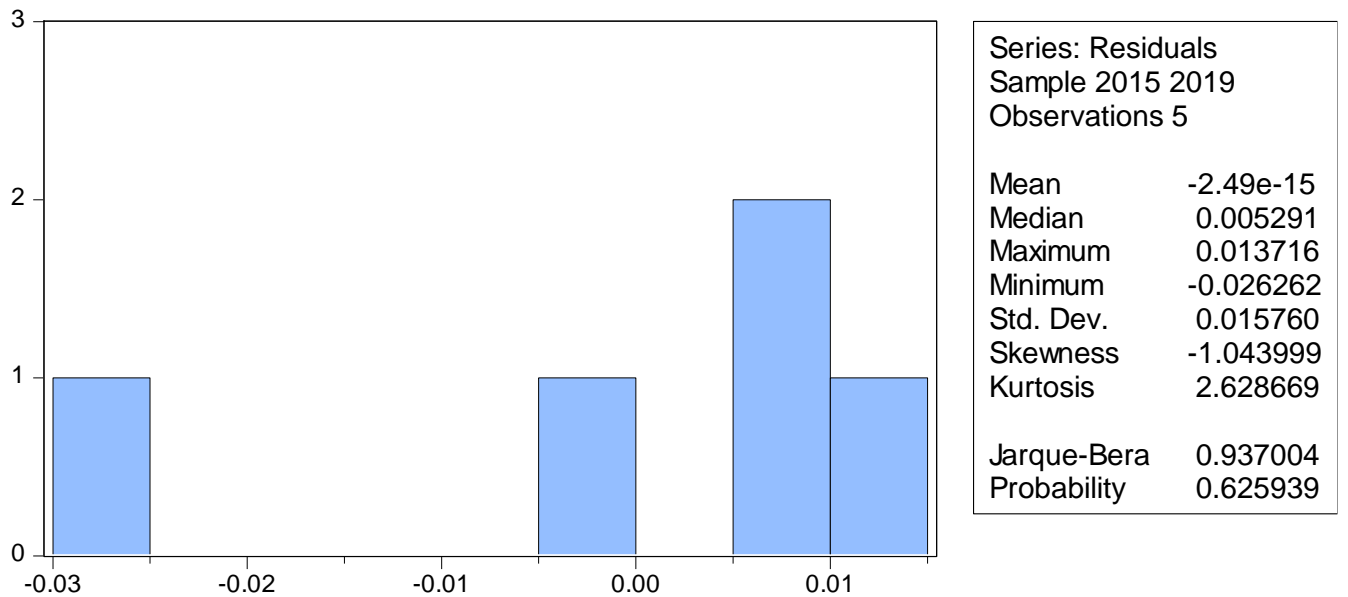Q-statistic probabilities adjusted for 1 dynamic regressor

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
. *| .|	. *| .|	1	-0.067	-0.067	0.0392	0.843
. *****| .|	. *****| .|	2	-0.615	-0.622	4.4527	0.108
. | .|	. *| .|	3	0.055	-0.087	4.5064	0.212
. |* .|	. ***| .|	4	0.127	-0.428	5.0670	0.280

Source: Author's analysis using e-view 9 output
The correlogram Q- Stat. table indicates that all p-values were >5% hence the conclusion that the model was free from auto correlation.
Test for Normality
Figure 1: Normality Chart

Series: Residuals	
Sample 2015 2019	
Observations 5	
Mean	-2.49e-15
Median	0.005291
Maximum	0.013716
Minimum	-0.026262
Std. Dev.	0.015760
Skewness	-1.043999
Kurtosis	2.628669
Jarque-Bera	0.937004
Probability	0.625939

Source: Author's analysis using e-view 9 output
Observing from the normality diagram in figure 1 above, as well as the Jaque Bera value of approximately 1.00 and its p-value of 0.63 which is >5% significant level, confirms that the data are normally distributed.

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.164761	Prob. F(3,1)	0.9094
Obs*R-squared	1.653914	Prob. Chi-Square(3)	0.6472
Scaled explained SS	0.053874	Prob. Chi-Square(3)	0.9967

The kurtosis value of approximately 2.63 supports that the variables are normally distributed since the kurtosis value revolves around 3.

Test for Heteroskedasticity
Table 4: Test for Heteroskedasticity

Source: Author's analysis using e-view 9 output

The Heteroskedasticity test above suggests that the variables are free from the problem of Heteroskedasticity since the p-values of F-stat. and Obs*R-squared of 0.91 and 0.65 respectively are > 5% significance level. This outcome is further strengthened by the p-value of the Scaled explained SS (0.99) which also suggest the absence of Heteroskedasticity.

Results of ARDL Model for Hypothesis Two
Table 5: Results of ARDL Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LOG(ASI(-1))	0.051903	0.371023	0.139892	0.9115
LOG(FED)	0.154874	0.105526	1.467644	0.3808
LOG(EXR)	-0.379774	0.374309	-1.014599	0.4954
C	10.77614	4.432154	2.431355	0.2484
R-squared	0.687637	Mean dependent var		10.33263
Adjusted R-squared	-0.249450	S.D. dependent var		0.090116
S.E. of regression	0.100730	Akaike info criterion		-1.762178
Sum squared resid	0.010147	Schwarz criterion		-2.074627
Log likelihood	8.405444	Hannan-Quinn criter.		-2.600762
F-statistic	0.733802	Durbin-Watson stat		3.376962
Prob(F-statistic)	0.672594			

Source: Author's analysis using e-view 9 output

The ARDL Model result as shown in table 5 above suggests that Foreign Exchange Derivative had a positive impact on All Share Index while Exchange Rate recorded a negative impact on All Share Index

in Nigeria. The result further revealed that a percent increase in Foreign Exchange Derivative would bring about a 15.5 percent increase in All Share Index. Also, a percent increase in exchange rate would bring about approximately 38 percent decrease in All Share Index and vice versa.

The R-squared of approximately 0.69 showed that the regressors accounted for about 69% variations in the regressand. In other words, about 69% variations in All Share Index were explained by Foreign Exchange Derivative and Exchange Rate, while the remaining 31% may be attributed to stochastic variables.

Durbin-Watson stat. of approximately 3.4 suggests the presence of auto-correlation since it is farther off the region of 2.

Diagnostic Test
Test for Auto Correlation
Table 6: Correlogram Q-Statistic
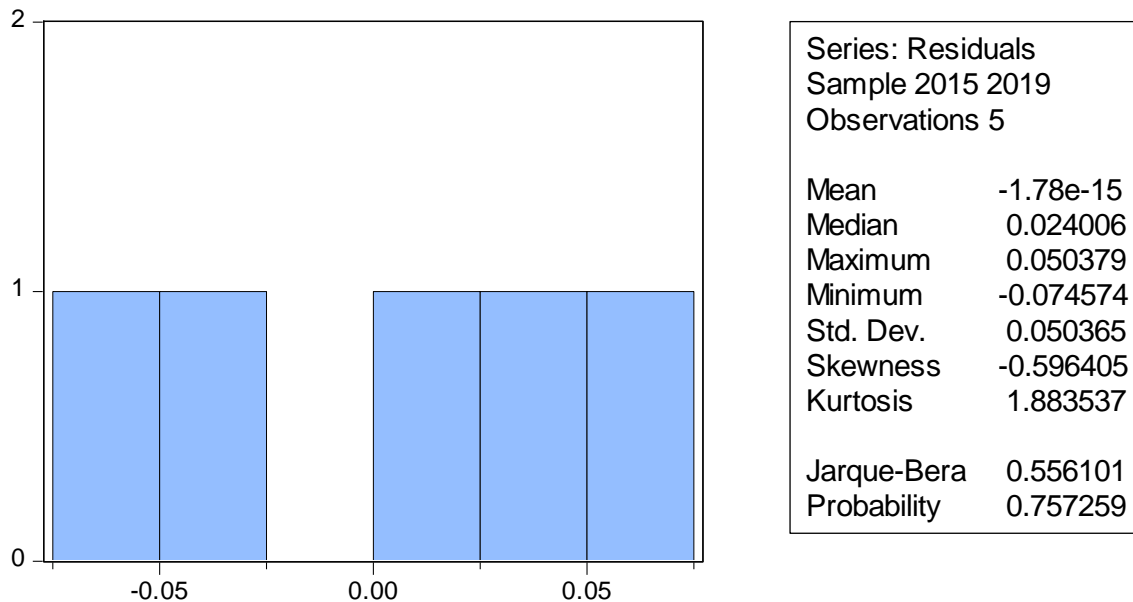Q-statistic probabilities adjusted for 1 dynamic regressor

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob*
. *****| .|	. *****| .|	1	-0.753	-0.753	4.9663	0.026
. |*** .|	. **| .|	2	0.453	-0.265	7.3598	0.025
. **| .|	. *| .|	3	-0.264	-0.080	8.5790	0.035

Source: Author's analysis using e-view 9 output

The correlogram Q- Stat. table indicates that all p-values were <5% hence the conclusion that the model was not free from auto correlation.

Test for Normality
Figure 2: Normality Chart

Series: Residuals	
Sample 2015 2019	
Observations 5	
Mean	-1.78e-15
Median	0.024006
Maximum	0.050379
Minimum	-0.074574
Std. Dev.	0.050365
Skewness	-0.596405
Kurtosis	1.883537
Jarque-Bera	0.556101
Probability	0.757259

Source: Author's analysis using e-view 9 output

Observing from the normality diagram in figure 2 above, as well as the Jaque Bera value of approximately 0.56 and its p-value of 0.76 which is >5% significant level, confirms that the data are normally distributed.

Test for Heteroskedasticity

Table 7: Test for Heteroskedasticity

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.494649	Prob. F(3,1)	0.7498
Obs*R-squared	2.987075	Prob. Chi-Square(3)	0.3936
Scaled explained SS	0.052784	Prob. Chi-Square(3)	0.9968

Source: Author's analysis using e-view 9 output

The Heteroskedasticity test above suggests that the variables are free from the problem of Heteroskedasticity since the p-values of F-stat. and Obs*R-squared of 0.78 and 0.40 respectively are > 5% significance level. This outcome is further strengthened by the p-value of the Scaled explained SS (0.99) which also suggest the absence of Heteroskedasticity.

Test of Hypothesis

Test of Hypothesis One

$H0_1$: foreign exchange derivative has no significant impact on market capitalization in the Nigerian stock market.

Since the p-value for Foreign Exchange Derivative (LOG(FED)) of 0.5596 (56%) is >5% level of significance, the null hypothesis that foreign exchange derivative has no significant impact on market capitalization in the Nigerian stock market in Nigeria is not rejected. (Refer to table 2).

Test of Hypothesis Two

$H0_2$: foreign exchange derivative has no significant impact on All Share Index in the Nigerian stock market.

Since the p-value for Foreign Exchange Derivative (LOG(FED)) of 0.3808 (38%) is >5% level of significance, the null hypothesis that foreign exchange derivative has no significant impact on All Share Index in the Nigerian stock market in Nigeria is not rejected. (Refer to table 5).

Discussion of Results

1. From the result obtained from table 2, Foreign Exchange Derivative was found to have a positive and insignificant impact on market capitalization in Nigeria. The outcome of this result maybe attributed to lack of awareness and usage for Foreign Exchange Derivative in the Nigerian stock market and the Nigerian financial system at large.

2. From the result obtained from table 5, Foreign Exchange Derivative was found to have a positive and insignificant impact on All Share Index in Nigeria. The insignificant impact of Foreign Exchange Derivative on All Share Index may be attributed to lack of understanding, trading and usage of derivative securities as hedging tools in the Nigerian financial system.

A priori Economic Expectation Result

The result of this analysis is compared to that of A priori expectation in the table below.

Variables	Expected Signs	Actual Signs	Remark
LOG(FED)	Positive (+, +)	Positive (+, +)	Conform
LOG(EXR)	Negative (-, -)	Negative/Positive (-, +)	Conform/Do not conform

Conclusion and Recommendations
Conclusion
The broad objective of this study was to ascertain the impact of derivative securities on the productivity of the Nigerian stock market between 2014 and 2019. This study utilized Market Capitalization and All Share Index as measures of the productivity of Nigerian stock market, while Foreign Exchange Derivative was employed as the regressor and Exchange Rate was included in the model as a control variable. The results of ARDL Model revealed that Foreign Exchange Derivative had a positive and insignificant impact on both Market Capitalization and All Share Index, while Exchange Rate had a positive impact on Market Capitalization and a negative impact on All Share Index. Inference can be drawn that Foreign Exchange Derivative had a positive impact on productivity of stock market in Nigeria within the period under review.

Recommendations
From the results of the ARDL Model, the following recommendations are provided

1. Monetary authorities in Nigeria should create awareness on the importance and efficacy of derivative securities as hedging tools in the Nigerian financial system.

2. Emphasis should be laid on the deepening of the Nigerian derivative market through the introduction and trading of derivative instruments such as swaps, options, futures and forwards amongst others as applicable in the financial systems of advanced countries. If this is done, the productivity of the Nigerian stock market would be greatly enhanced.

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