

Foreign Exchange Trading and Risk Management Technique On Quoted Commercial Banks Financial Performance in Nigeria (1993-2018)

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ABSTRACT

Foreign exchange trading and risk management technique has gained prominence in the last decade as a result of the unusual occurrence of a large number of currency crises. From the corporate finance perspectives, currency risk management is increasingly viewed as a product approach to reducing banks vulnerabilities from major exchange rate movement. This attitude has also been reinforced by recent international attention to both accounting and balance sheet risk. This study examined the impact of foreign exchange trading and risk management technique on quoted commercial banks financial performance in Nigeria. The study employs the use of secondary sources of data obtained from CBN statistical bulletin 2018, and subjected them to ADF test, co-integration test, and the error correction model were employed to estimate parameters and test outlined hypotheses using t-statistics outcome. The study revealed that a unit reduction in foreign exchange rate, interest rate and loan to deposit ratio will drive an increase in return on equity (ROE) of quoted commercial banks in Nigeria. This equally indicated that there is a significant impact of foreign exchange trading and risks management technique on quoted commercial banks financial performance in Nigeria for the period under study. The study therefore, recommends quoted commercial banks in Nigeria to create a centralized entity within its operations as an institutional strategy to deal with the practical aspects of the execution of exchange rate forecasting, while the hedging approach mechanism should be adopted in the accounting procedure regarding currency risk.

Keywords: Foreign exchange, risk management, banks, financial performance, currency.

1.0 INTRODUCTION

Foreign exchange plays a vital role in any economy as it directly measures domestic prices, profitability of traded goods and services, allocation of resources and investment decision. The stability of foreign exchange is today formidable bedrock of all economic activities. Since the adoption of the Structural Adjustment Programme (SAP) in 1986, Nigeria has revolved in various types of regimes of foreign exchange. Measured from; floating, fixed or pegged regimes of 1960s to mid-1980s. However, floating foreign exchange has been shown to be the most preferable to the fixed arrangement because of the responsiveness of the rates to the foreign exchange market (Nwankwo, 2005).

The liberalization of the foreign exchange regime in 1986 has led to introduction of various techniques with the view of finding the most unique method for achieving acceptable exchange rate for the Naira. The frequencies with which these measures were introduced and changes informed by the determined efforts of the monetary authorities to relentlessly combat the unbaiting depreciation and instability of the Naira.

In continued effort to stabilize foreign exchange, as well as ensure a single exchange rate for the Naira, numerous variants of market determined rates have been adopted since 1986. The Second-tier Foreign Exchange Market (SFEM) was introduced in 1986, while the First and Second tier markets were merged into enlarged Foreign Exchange Market (FEM) in 1987, this was later changed to the Inter-Bank Foreign Exchange Market (IFEM) in January 1989. This new system allowed for bureau de change to source for their foreign exchange requirement from the IFEM. This was later modified to the Autonomous Foreign Exchange Market (AFEM) in 1995 which allow the Central Bank to purchase foreign exchange from oil companies.

Nevertheless, financial system has an important role in the country (Das and Ghosh, 2007) as its failure can disrupt economic development of the country. Bank's financial performance is the ability to generate new resources from day to day operation over a given period of time and being gauged by net income and cash from operation. Bank's performance measure can be divided into traditional measures and market based measures (Aktan and Bulut, 2008). New banking risk management techniques emerged in early 1990's. To be able to manage the different types of risk one has to define them before one can manage them. Credit risk, interest rate risk, liquidity risk, market risk, foreign exchange risk and solvency risk are the most applicable risk to the banks.

According to Appa (1996), Risk management is the human activity which integrates recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources, but credit risk is the risk of loss due to debtor's non-payment of a loan or other line of credit (either the principal or interest or both) (Campbell, 2007). Commercial banks are financial institutions that provide financial services, including issuing money in various forms, receiving deposits of money, lending money and processing transactions and credit creation (Campbell, 2007).

The importance of credit risks management to banks cannot be overemphasis and it also forms an integral part of the loan process. Credit risk management maximizes bank risk, adjusted risk rate of return by maintaining credit risk exposure with view to shielding the bank from the adverse effects of credit risk.

It is pertinent to question the financial performance of banks in relation to its foreign exchange trading and risks management technique in Nigeria on contemporary basis.

Therefore, this study seeks to examine the impact of foreign exchange trading and risks management on financial performance of quoted commercial banks in Nigeria. However, target objectives of the study are depicted as:

- I. To determine the effect of foreign exchange rate on return on equity of quoted commercial banks in Nigeria.
- II. To determine interest rate impact on return on equity of quoted commercial banks in Nigeria.
- III. To examine the influence of loan to deposit ratio on return on equity of quoted commercial banks in Nigeria.

The rest of the study is subdivided into: Review of related literatures, methodology, analyses and interpretation of data, summary, concluding remarks and recommendations.

2.0 REVIEW OF RELATED LITERATURES

2.1 CONCEPTUALIZATION

FOREIGN EXCHANGE: Foreign exchange can be as simple as changing one currency for another at a local bank. It can also involve trading currency on the foreign exchange market.

Movements in foreign exchange tend to be influenced by two important variables namely the relative prices of goods in two countries and relative interest rates. The Purchasing Power Parity (PPP) theorem explains the relationship between relative prices of goods and exchange rates. The PPP theorem propounds that under a floating exchange regime, a relative change in purchasing power parity for any pair of currency calculated as a price ratio of traded goods would tend to be approximated by a change in the equilibrium rate of exchange between these two currencies (Shapiro and Rutenberg, 1976).

Determinants of Exchange Rates

Numerous factors determine exchange rates, and all are related to the trading relationship between two countries. Remember, exchange rates are relative, and are expressed as a comparison of the currencies of two countries. According to Jason Van Bergen (2017), the following are some of the principal determinants of the exchange rate between two countries. Note that these factors are in no particular order; like many aspects of economics, the relative importance of these factors is subject to much debate.

Differentials in Inflation

As a general rule, a country with a consistently lower inflation rate exhibits a rising currency value, as its purchasing power increases relative to other currencies. During the last half of the 20th century, the countries with low inflation included Japan, Germany and Switzerland, while the U.S. and Canada achieved low inflation only later. Those countries with higher inflation typically see depreciation in their currency in relation to the currencies of their trading partners. This is also usually accompanied by higher interest rates.

Differentials in Interest Rates

Interest rates, inflation and exchange rates are all highly correlated. By manipulating interest rates, central banks exert influence over both inflation and exchange rates, and changing interest rates impact inflation and currency values. Higher interest rates offer lenders in an economy a higher return relative to other countries. Therefore, higher interest rates attract foreign capital and cause the exchange rate to rise. The impact of higher interest rates is mitigated, however, if inflation in the country is much higher than in others, or if additional factors serve to drive the currency down. The opposite relationship exists for decreasing interest rates; that is, lower interest rates tend to decrease exchange rates.

Current-Account Deficits

The current account is the balance of trade between a country and its trading partners, reflecting all payments between countries for goods, services, interest and dividends. A deficit in the current account shows the country is spending more on foreign trade than it is earning, and that it is borrowing capital from foreign sources to make up the deficit. In other words, the country requires more foreign currency than it receives through sales of exports, and it supplies more of its own currency than foreigners demand for its products. The excess demand for foreign currency lowers the country's exchange rate until domestic goods and services are cheap enough for foreigners, and foreign assets are too expensive to generate sales for domestic interests.

Public Debt

Countries will engage in large-scale deficit financing to pay for public sector projects and governmental funding. While such activity stimulates the domestic economy, nations with large public deficits and debts are less attractive to foreign investors. This is because, a large debt encourages inflation, and if inflation is high, the debt will be serviced and ultimately paid off with cheaper real dollars in the future.

In the worst scenario, a government may print money to pay part of a large debt, but increasing the money supply inevitably causes inflation. Moreover, if a government is not able to service its deficit through domestic means (selling domestic bonds, increasing the money supply), then it must increase the supply of securities for sale to foreigners, thereby lowering their prices.

Finally, a large debt may prove worrisome to foreigners if they believe the country risks defaulting on its obligations. Foreigners will be less willing to own securities denominated in

that currency if the risk of default is great. For this reason, a country's debt rating (as determined by Moody's & Poor's) is a crucial determinant of its exchange rate.

Terms of Trade

The ratio comparing export prices to import prices, the terms of trade is related to current accounts and the balance of payments. If the price of a country's exports rises by a greater rate than that of its imports, its terms of trade have favorably improved. Increasing terms of trade shows greater demand for the country's exports. This, in turn, results in rising revenues from exports, which provides increased demand for the country's currency (and an increase in the currency's value). If the price of exports rises by a smaller rate than that of its imports, the currency's value will decrease in relation to its trading partners.

Political Stability and Economic Performance

Foreign investors inevitably seek out stable countries with strong economic performance in which to invest their capital. A country with such positive attributes will draw investment fund away from other countries perceived to have more political and economic risk. Political turmoil, for example, can cause a loss of confidence in a currency and a movement of capital to the currencies of more stable countries.

RISKS MANAGEMENT: Risk is the measure of the level of uncertainty in an event or activity. It is the likelihood of a negative outcome. In finance, it can be defined as the probability that the actual return on investment will be different from the expected return. Taiwo, et al (2017) in their study opined that risk is the likelihood of losing the principal and or the amount of interests accrued on it either in part or whole.

Risk can be managed with the aim to reduce its effect and or maximize benefits. The concept of risk management has to do with the identification, evaluation, and prioritization of

risks as well as the harmonized and reasonable use of resources to minimize, supervise, and control the possibility and the effect of inappropriate incidences (Zidafamor, 2016). It covers the practice of identifying risks, evaluating their consequences, and coming up with the decision on the best possible means to minimize it so as to optimize the benefits (Adenkule & Ishola, 2011).

Ideally, a sound risk management practice involves the pursuance of order process whereby those risks with the highest loss and the highest likelihood of occurring are brought under control first, and those with lesser possibility of happening and lesser loss are controlled in descending order (Isa, 2014). He also noted that the process of risk management can be very challenging in practice because balancing between these probabilities can easily be mismanaged. However, it is only an ideal risk management procedure that can help to reduce spending as well as the adverse effects of risks. For the financial institutions, risk management allows them to isolate and stop the dangers to which they are exposed (Adenkule & Ishola, 2011).

In a broad perspective, financial risk can be classified into systematic and unsystematic risk. Isa (2014) described the systematic risk as irrelevant risk since they are beyond the control of business managers working in the market. It is irrelevant from the point of view that it is practically difficult to shade businesses from systematic risk. The study posits that unsystematic risk is the relevant risk which a manager should border about because it is under the control of the investor to decide in which security to invest or not, and can be controlled or eliminated through diversification.

FINANCIAL PERFORMANCE: Financial performance in broader sense refers to the degree to which financial objectives being or has been accomplished, and is an important aspect of financial risk management. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over given

period of time and can also be used to compare similar firms across the same industry or compare industries or sectors in aggregation.

2.2 THEORETICAL FRAMEWORK

This study hinges on the theories of purchasing power and shiftability.

The Purchasing Power Parity theory (PPP): Advanced by Menon and Viswanathan (2005).

PPP theory explains that the value of homogenous goods is similar in different countries based on the currency of each country. According to them, when purchasing power is similar in different countries then the exchange rates between the country's currencies will be at equilibrium. Reid and Joshua (2004) postulated that ratio of commodities price levels should equal the country's currency. According Ross (2008), a country's currency may be incorrectly valued whereby money has no purchasing power against the country's commodities level.

This theory is based on the assumptions that there are no transactional costs, no barriers to trade and the commodities being traded are homogeneous. If the trading currency is exchanged at the spot exchange rate, the price of a homogenous commodity should be identical across borders. The theory suggested use of price indexes to determine the exact price of a homogenous commodity between countries. The main challenge of this belief is in measuring Purchasing Power Parity constructed from price indexes given that different countries use different goods to determine their price level (Reid, 2005).

The Shiftability theory: The Shiftability theory propounded by H. G. Moulton, argues that risk can be managed by obtaining liquidity converting assets to shift open market securities. When a bank that maintains a substantial amount of assets is in dire need of ready money, this theory supports the shifting of such assets to a more liquid bank. In line with this proposition, banks do accept shares and debentures of viable companies as liquid assets thus encouraging term lending.

2.3 EMPIRICAL REVIEW

Many scholars have conducted empirical research in order to examine the studied subject. The following are few among others.

Yu Hsing (2006) empirically examined that the determination of short-term real exchange, has positive effect on exchange rate and broad money supply, while country risk and the expected rate of inflation have negative impact on exchange rate on the performance of the banks. It follows therefore that the respective national authority would need to avoid fiscal indiscipline in order to prevent the exchange rate from real appreciation since it will significantly influence the country's export from declining.

Annofe (2005) investigate the variable that affects exchange rate movement in Sweden, United Kingdom and Japan against the US dollar for the period 1995 to 2004. The result indicated that interest rate differential is statistically significant in explaining changes in exchange rate in the three countries, while, interest rate has negative effect in exchange rate in Sweden and the United Kingdom, however, the influence of money supply, industrial production and inflation differential on exchange rate varies between the countries.

Imeddrine and Christopher (2003) analyzed the main determinants of the real exchange rate in the Middle East and North Africa countries. The findings indicated that output per capital, government expenditure, real interest rate differentials, and the degree of openness of the economy influence the real exchange rate.

Beatrice (2001) employed a co-integration technique to investigate the long-run determination of the real exchange rate for import and exports and of the internal real exchange rate in Zambia. The result showed that real exchange rate for import is affected by terms of trade and government share. Moreover terms of trade, central bank reserves and trade taxes have long-run impact on the real exchange rate for exports. It was also revealed that terms of trade,

investment share and the rate of growth of real GDP have long-run effect on the internal real exchange rate, while foreign aid and openness in dealings (financial/economic liberalization), all have short-run inflation on the real exchange rate indices.

Owoeye, and Ogunmakin (2013) examined exchange rate volatility and bank performance in Nigeria. Their study investigated the impact of unstable exchange rate on bank performance in Nigeria using two proxies for bank performance, namely loan loss to total advances ratio and capital deposit ratio. Government expenditure, interest rate, real gross domestic product were added to exchange rate as independent variables. The two models specified show that the impact of exchange rate on bank performance is sensitive to the type of proxy used for bank performance. Loan loss to total advance ratio shows that fluctuating exchange rate may affect the ability of lenders to manage loans resulting into high level of bad loans while capital deposit ratio does not have significant relationship with exchange rate. A core recommendation of the study is that a stable exchange rate is needed to improve the ability of the banking sector to channel credit to the economy.

Adetayo (2013) examined management of foreign exchange risks in a selected commercial bank, in Nigeria. The study sought to determine how the risk involved in foreign exchange can be effectively managed by determining the following specific objectives: to determine the various exchange risks which the treasury of the selected bank is exposed to in its foreign exchange transaction; to investigate how these risks can be effectively managed and to identify risk and exposure management techniques required for treasury management. The selected firms used for the study was a Commercial Bank of International Standard, located in Lagos, the business center of Nigeria. The study exploited both the primary and secondary sources of information. The primary source comprised of a structured questionnaires, to elicit

pertinent responses from the respondents. A non-parametric measure based on chi-square statistics was employed to test the hypothesis and determine if there is any association between foreign exchange trading and risk management issues. Spot transaction technique was founded to be effective in minimizing foreign exchange risk.

Opaluwa, Umeh and Ameh (2010) examined the effect of exchange rate fluctuations on the Nigerian manufacturing sector during a twenty (20) years period (1986-2005). The argument was that fluctuations in exchange rate adversely affected output of the manufacturing sector. This was because Nigerian manufacturing sector was highly dependent on import of inputs and capital goods paid for in foreign exchange whose rate of exchange was unstable. The econometric tool of regression was used for the analysis. In the model that was used, manufacturing output employment rate and foreign private investment were used as the explanatory variables. The result of the regression analysis shows that coefficients of the variables carried both positive and negative signs. The study shows adverse effect and is all statistically significant in the final analysis.

Shehu (2012) examined the relationship between exchange rate volatility, trade flows and economic growth in Nigeria using the annual data for period of 1970 to 2009. Using a Vector Auto-regression (VAR) technique, the result revealed that exchange rate volatility has positive effects on the economic growth in Nigeria.

Almost all the studies reviewed globally and within the national pegs on the studied subject did not consider independently return on equity as controlled variable (quoted commercial banks performance). Thus, it is imperative therefore to do so to examine the studied subject.

This is because return on equity is a financial soundness indicator that shows the financial performance of banks.

Return on equity (ROE) of commercial banks is a measure of profitability of banks in relation to equity; it is also known as net assets or assets minus liabilities. Thus, it measures how well banks use investment to generate earnings growth. Furthermore, another gap in literature identified is the period covered. This study considered a range of 1993-2018 respectively, which is distinct from previous related studies.

3.0 METHODOLOGY

RESEARCH HYPOTHESES

The research hypotheses in this study are formulated in the null form in order to bring forth clarity of purpose.

H₀₁: Foreign exchange rate has no significant impact on return on equity of quoted commercial banks in Nigeria.

H₀₂: Interest rate has no significant impact on return on equity of quoted commercial banks in Nigeria.

H₀₃: Loan to deposit ratio has no significant influence on return on equity of quoted commercial banks in Nigeria.

DATA REQUIREMENT AND SOURCES

Considering a study of this kind, it is necessary to choose data that will align the estimation and testing of the hypotheses formulated. Foreign Exchange rate (FXGR), Interest rate (INTR) and Loan to deposit ratio (LDR) as proxy of the impact variable (foreign exchange

and risks management) while Return on Equity (ROE) is used as the controlled variable (financial performance of banks) for the period under study.

Time series data are employed for this study. The data were obtained from Central Bank of Nigeria (CBN) annual statistical bulletin 2018.

- **RETURN ON EQUITY (ROE):** Return on equity of commercial banks is a measure of profitability of banks in relation to equity; it is also known as net assets or assets minus liabilities. Thus, it measures how well banks use investment to generate earnings growth.
- **FOREIGN EXCHANGE RATE (FXGR):** Foreign exchange rate can be simple put as the rate at which one country's currency is exchanged for another at a local bank. It can also involve trading currency on the foreign exchange market.
- **INTEREST RATE (INTR):** This is the rate of interest at which banks charges for lending money to individuals or corporate bodies which rates varies from time to time.
- **LOAN TO DEPOSIT RATIO (LDR):** Loan to deposit ratio is the ratio of total loans and advances to total deposit liabilities. Loan is represented by total loan in the balance sheet, whilst the deposits include demand deposits, time deposits, certificate of deposits, savings, issued securities, prime capital, loan capital, and borrowing. This ratio shows the proportion of public contribution as a source of capital to finance the banks' loans. Smaller loan deposit ratio number indicates that public provides smaller proportion to support the banks' loans. The ratio represents a good proxy for risk management mechanism for banks. Eighty percent (80%) is the maximum limit prescribed by Central Bank of Nigeria (CBN) for commercial banks in Nigeria.

DATA ANALYSIS METHOD

The following econometric techniques shall be employed for the analysis of the data-set and the estimation of the model:

- (a). Augmented dickey-fuller (ADF) test. (b). Johansen Co-integration test (c). And (d). Error Correction Mechanism (ECM).

MODEL SPECIFICATION

In accordance with the formulated hypotheses in this study, the model of this study will be built as: Return on equity (ROE) as determinant for financial performance of quoted commercial banks, which is the controlled variable while foreign exchange rate (FXGR), interest rate (INTR) and loan to deposit ratio (LDR) are all control variables employed in the study.

The specification of econometric model is based on economic theory relating to the studied subject that requires basically:

1. Determination of the controlled and control variables.
2. Theoretical apriori expectation and signs of functional parameters relationships.
3. Determination of the mathematical form of model (Gujarati, 2004).

In analyzing the studied subject we adopt and modified an empirical model of Okika, Udeh, Francis & Okoye (2018). Their model was used to study effect of exchange rate fluctuation on firm profitability: evidence from quoted conglomerate in Nigeria.

Their model will be adjusted to reflect the current study showing the functional relationship of the variables employed.

$$ROE = f(FXGR, INTR, LDR, \dots) \dots \dots \dots 1$$

Where,

ROE = Return on asset.

FXGR = Foreign exchange rate

INTR = Interest rate

LDR = Loan to Deposit ratio.

The econometric specification of the explicit form of the multiple regression models is given as follows;

$$ROE_t = a_0 + a_1FXGR_t + a_2INTR_t + a_3LDR_t + U_{et}.....(2)$$

Where:

a_0 = intercept

$a_1...a_3$ = Coefficients of the control variables to be estimated. They measure the effect of a unit change in foreign exchange and risk management on financial performance of quoted commercial banks in Nigeria.

U_{et} = Error term of the time series for data.

Decision Rule: In this study the decision rule is to reject the null hypothesis (H_0) if the calculated t-statistics is greater than the table value at 5% level of significance.

4.0 ANALYSIS AND INTERPRATION OF DATA

DATA EMPLOYED IN THE STUDY

YEARS	LDR	INTR	FXGR	ROE
1993	42.9	18.32	66	50.8
1994	60.9	21	66	56.1
1995	73.3	20.18	79	52.3
1996	72.9	19.74	79	56.8
1997	76.6	13.54	82	96.6
1998	74.4	18.29	84	86.1
1999	54.6	21.32	93.95	80.6
2000	51	17.98	102.1	99.5
2001	65.6	18.29	111.93	114.3
2002	62.8	24.85	121	41.6
2003	61.9	20.71	129.3	29.1
2004	68.6	19.18	133.5	27.2
2005	70.8	16.54	131.66	4.8
2006	63.6	16.84	128.65	17.4
2007	70.8	16.84	134.05	36.8
2008	80.9	16.42	132.37	24.1
2009	85.7	17.2	149.69	-64.7
2010	74.2	16.92	50.47	16.0
2011	44.8	16.86	158.2	-0.3
2012	48	16.69	157.3	22.2
2013	46.9	16.56	157.27	24.1
2014	44.6	17.13	169.68	21.7
2015	33.4	17.08	196.99	19.2
2016	36.3	16.08	<u>305.22</u>	18.9
2017	31.2	17.78	356.22	21.1
2018	33.4	18.08	355.23	23.3

Source: CBN statistical bulletin 2018

Table 1.1 Unit root test results for Return on Equity (ROE)

Null Hypothesis: D(ROE) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-6.664811	0.0000
Test critical values: 1% level	-3.737853	
5% level	-2.991878	
10% level	-2.635542	

Interpretation: Order of integration at 5% = 1(1)

Source: E-view 9 output

Table 1.2 Unit root test results for Foreign Exchange Rate (FXGR)

Null Hypothesis: D(FXGR) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-2.543347	0.0134
Test critical values: 1% level	-2.664853	
5% level	-1.955681	
10% level	-1.608793	

Interpretation: Order of integration at 5% = 1(1)

Source: E-view 9 output

Table 1.3 Unit root test results for Interest Rate (INTR)

Null Hypothesis: D(INTR) has a unit root

Exogenous: Constant

Lag Length: 1 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-5.806100	0.0001
Test critical values: 1% level	-3.752946	
5% level	-2.998064	
10% level	-2.638752	

Interpretation: Order of integration at 5% = 1(1)

Source: E-view 9 output

Table 1.4 Unit root test results for Loan to Deposit Ratio (LDR)

Null Hypothesis: D(LDR) has a unit root

Exogenous: Constant

Lag Length: 0 (Automatic - based on SIC, maxlag=5)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.256200	0.0030
Test critical values: 1% level	-3.737853	
5% level	-2.991878	
10% level	-2.635542	

Interpretation: Order of integration at 5% = 1(1)

Source: E-view 9 output

Table 1.1 to 1.4 shows the unit root test results of the variables employed in the study. The results shows that all variables employed in the study are integrated at first difference, symbolized by 1(1) at 5% significant level.

Thus, this means that variables employed has no unit root problem. Note, a variable is said to have no unit root problem if the test statistics is greater than the critical value in absolute terms.

This shows that data employed can be used for meaningful decision making.

Table 1.5 Johansen Cointegration Test Results

Date: 08/29/19 Time: 23:31
 Sample (adjusted): 1995 2018
 Included observations: 24 after adjustments
 Trend assumption: Linear deterministic trend (restricted)
 Series: ROE FXGR INTR LDR
 Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.635627	65.04792	63.87610	0.0397
At most 1	0.578427	40.81806	42.91525	0.0799
At most 2	0.374634	20.08778	25.87211	0.2215
At most 3	0.307587	8.821738	12.51798	0.1916

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: E-view 9 output

Table 1.5 evidenced the Johansen cointegration test result that indicates the existence of one cointegrating long run relationship among variables employed in this study. We arrive at this conclusion by comparing the trace statistic against the Critical Values at 5% significant level.

Table 1.6 Parsimonious Error Correction Mechanisms (ECM)

Dependent Variable: D(ROE)

Method: Least Squares

Date: 08/30/19 Time: 00:01

Sample (adjusted): 1994 2018

Included observations: 25 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.216390	1.433707	2.243408	0.0435
D(FXGR)	-0.659097	0.252985	-2.434570	0.0365
D(INTR)	-3.918374	1.470744	-2.664212	0.0311
D(LDR)	-0.570448	0.180383	-3.162426	0.0241
ECM(-1)	-0.405544	0.147705	-2.745634	0.0296
R-squared	0.720519	Mean dependent var	-3.100000	
Adjusted R-squared	0.564623	S.D. dependent var	48.73582	
S.E. of regression	28.65688	Akaike info criterion	12.72521	
Sum squared resid	16424.34	Schwarz criterion	9.969296	
Log likelihood	-116.5690	Hannan-Quinn criter.	9.793134	
F-statistic	2.358562	Durbin-Watson stat	2.123202	
Prob(F-statistic)	0.000218			

Source: Author's computation: E-view 9 output

The above table 1.6 portrays the impact of foreign exchange and risk management technique on financial performance of quoted commercial banks in Nigeria. The t-test output will be used to test the hypotheses formulated in the study. The error correction term will tell us the speed with which our model returns to equilibrium following short run fluctuations not captured in the Johansen co-integration test. The ECM coefficient of -0.405544 indicates that ECM is well specified and the diagnostic statistics are good. The negative sign indicates the short run

adjustment of the control variables to the controlled variable. The ECM term also shows 40% slow speed of adjustment towards equilibrium. This implies that 40% of disequilibrium caused by exogenous shocks or short run fluctuations in the previous period is corrected in the current year.

Using the a priori criteria of evaluating the parameters, all the variables including the constant (FXGR, INTR, LDR and ECM(-1)) met a priori expectations hence fulfilling the economic criterion of the model.

The results also show that FXGR, INTR and LDR are non-linear (negative) and statistically significant to ROE both in short and in the long run. Furthermore, the results of the test of the overall significance of the model using F-statistics shows that the entire model is statistically significant. We arrive at this conclusion because the F-statistics is greater than the F-probability. Coefficients of determination (R^2) indicate that 72% of total variation in ROE is explained by the control variables in the model. This means that the model is of good fit. Finally, the Durbin-Watson statistics, a rule of thumb for the measure of autocorrelation is greater than Coefficients of determination, thus, indicating the absence of first order autocorrelation.

TEST OF HYPOTHESES

Table 6 above reveals that foreign exchange rate (FXGR), interest rate (INTR) and loan to deposit ratio (LDR) as proxy of foreign exchange trading and risk management have t-statistic of -2.343570, -2.664212 and -3.162426 respectively with an associated table value of 2.060 which is less than 5% significant level. Hence the null hypotheses are rejected. This means that foreign exchange rate, interest rate and loan to deposit ratio have a significant impact on return on equity of quoted commercial banks as proxy of financial performance of banks in Nigeria for the period under.

4.1 DISCUSSIONS OF FINDINGS

The outcome of the error correction model (ECM) shown that foreign exchange trading and risks management techniques considering from 1993-2018 have a significant impact on the financial performance of quoted commercial banks in Nigeria. As evidenced from our empirical results, foreign exchange trading and risks management techniques proxies (foreign exchange rate, interest rate and loan to deposit ratio) had combined significant impact on quoted commercial banks financial performance proxy (return on equity) for the period under study.

Furthermore, foreign exchange rate has a negative but significant relationship with return on equity of quoted commercial banks in Nigeria. The negative co-efficient indicates that 1% reduction in foreign exchange rate will lead to 65% increase in quoted commercial banks return on equity. The negative but significant coefficients for interest rate and loan to deposit ratio also indicate negative relationship between the variables and quoted commercial banks return on equity.

This also means that 1% decrease in interest rate and loan to deposit ratio will spark up quoted commercial banks return on equity by 91% and 57% respectively. This finding confirms the Apriori expectation of the result and with that of Helhel (2015) that exchange rate is negatively related to firms' assets size. But contradict the empirical findings of Shehu (2012) whose empirical results revealed that exchange rate volatility has positive effects on banks performance.

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

Foreign exchange trading and risk management techniques on banks financial performance has been a long debate in corporate finance literature. This study revealed that foreign exchange

trading and risk management collectively impacted significantly on the financial performance of quoted commercial banks in Nigeria for the period under study.

However, individual control variables employed in the study (foreign exchange rate, interest rate and loan to deposit ratio) shows an inverse relationship with the controlled variable (return on equity) of the study.

Our conclusion therefore, is that foreign exchange trading and risk management is of utmost importance to the effective and efficient operations of banks as to guarantee its continuous optimal performance to earn investors' confidence and trust.

From the empirical findings of this study, we are constrained to recommend that:

Quoted commercial banks in Nigeria are encouraged to create a centralized entity within its operations as an institutional strategy to deal with the practical aspects of the execution of foreign exchange rate forecasting, while the hedging approach mechanism should be adopted in the accounting procedure regarding currency risk, and to develop an exchange rate risk management strategy.

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