Effects of Central Bank Regulations on Performance of Selected Deposit Money Banks in Nigeria: Panel Data Evidence.

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Abstract

The objective of the paper is to investigate the effect of regulation by the central bank on the performance of five selected deposit money banks (DMBs) in Nigeria. Return on assets (used as proxy for bank performance) is the dependent variable while the explanatory variables are bank rate (or monetary policy rate (MPR)), cash reserve ratio, treasury bills rate and exchange rate. To achieve the objective of the study, the panel FMOLS estimator is employed to analyse a balanced panel dataset (covering the period from 2003 to 2013) on five major commercial banks in the country. The empirical evidence indicates that monetary policy rate was positively and significantly related to bank performance. This was attributed to the rising demand for bank loans by the deficit unit (or the ultimate borrowers) of the economy in spite of the rising DMBs' lending interest rate engendered by the rise in the benchmark interest rate (MPR). It was also found that cash reserve ratio was negatively and significantly related to the return on assets of the banks. Furthermore, the study finds that exchange rate depreciation and high treasury bills rate are favourable to the performance of DMBs. To enhance the performance of DMBs in terms of improvement in their returns on assets, the paper recommends inter alia, lowering the cash reserve ratio, increasing the treasury bills rate, and avoiding excessive appreciation of the domestic currency.

Keywords: Bank Regulation, Bank Supervision, Deposit Money Banks, Return on Assets

JEL Codes: E52, E58, G21, G23.

1. Introduction

The deposit money banks also referred to as the commercial banks occupy central stage in the money market of the financial system, and they play pivotal role in the mobilization of funds from the surplus unit of the economy (savers) to the deficit unit (borrowers), thus actively participating in driving economic growth and

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development through financing of investment activities (Aigheyisi and Oaikhenan, 2014). The strength of the commercial banking subsector of the financial system is a key determinant of the strength of the financial system. Weakness of the financial system is caused mainly by weakness of the banking sector, hence efforts to strengthen the financial system usually begins with the strengthening of the banking sector, without which the financial system could suffer total collapse, thereby plunging the economy into deeper economic woes, as development of the entire financial system and the entire economy (Bouheni, Ameur, Cheffou and Jawadu, 2014).

In view of the importance of the banking sector to economic growth, the relevance of proper and adequate regulation and supervision of the banking system cannot be overemphasized. This is because proper regulation engenders soundness of the banking system and positions the banks to adequately play their ascribed roles of deposit mobilization, lending, etc.

The responsibility of bank regulation lies with the central bank. The primary function of the central bank is to control the supply of money in the economy through the use of monetary policy (instruments) by manipulating the interest rate, reserve requirement, etc and acting as lender of last resort to the commercial banks especially in times of financial turmoil.

return on assets in this paper) in Nigeria has not been adequately investigated. Most of the previous studies on effect of monetary policy instruments on commercial product moment correlation analysis, analysis of variance (ANOVA), etc which do not rformance, but only show the relationships between them. To the best of our knowledge, the effect of central a panel data econometric framework which actually gives a more reliable estimation of the effect of bank regulation on bank performance. A gap therefore exists in the literature and this paper intends to fill this gap.

The objective of this paper is to examine the effect of selected quantitative regulatory instruments of the central bank (such as bank rate, cash reserve ratio, treasury bills rate and exchange rate) on the return on asset (ROA) of commercial banks in Nigeria. These variables were selected because they represent some of the key variables affecting commercial banks lending which is one of their major functions.

2. Literature Review

Udeh (2015) employs the Pearson product moment correlation analysis to examine the impact of monetary policy instruments on the profitability of

commercial banks in the period 2005 to 2012 using Zenith Bank Plc as the case study. The study finds that interest rate, cash reserve ratio and liquidity ratio have no significant impact on the profit before tax (PBT) of the bank. However it finds by the minimum rediscount rate.

Enyioko (2012) examines the effect of interest rate policy on the performance of deposit money banks in Nigeria using a sample of 20 out of the 25 DMBs that emerged from the 2004/2005 banking sector consolidation exercise in the country. The methods employed for the analysis are regression analysis and analysis of variance (ANOVA). The study finds that interest rate policy exerts no significant effect on the performance of the banks. It also finds that the policy contributes economy.

Insurance Corporation (NDIC) regulation and supervision on the activities of commercial banks in Nigeria is investigated in Iyade (2006) using the statistical analyses involving percentages, mean score and chi-square test. The analyses indicate that the supervisory and regulatory framework of the CBN and the NDIC are not sufficient to guarantee effective banking practices in the country. In other words, supervisory and regulatory activities of the CBN and NDIC have not been effective.

Bouheni (2013) employs the system generalized method of moments to the investigate the effect of supervision on banking performance in Europe using a sample of 10 largest banks in France, Germany, Greece and UK in the period from 2005 to 2011. The study finds that banking supervision seems to have an impact on the performance of the banks generally. However, when variables capturing the specific, macroeconomic, financial development and institutional indicators are introduced, the impact is dismissed, suggesting that the impact of supervision on or environment.

Naceur and Omran (2011) examine the influence of bank regulation, concentration, financial and institutional development on net interest margins (NIMs) and profitability of commercial banks across a broad selection of Middle East and North Africa countries[1] in the period from 1998 to 2005 using dynamic panel estimation technique (the system generalized method of moments). The study finds that bank-specific characteristics such as bank capitalization and credit risk positively and significantly impact on (NIMs), cost efficiency and profitability. Further indications are that except for inflation, macroeconomic and financial development indicators have no significant impact on NIMs. Bank performance is also not affected by regulatory and institution variables.

[1] Countries included in the sample are Egypt, Lebanon, Jordan, Morocco, Tunisia, Bahrain, Kuwait, Oman Saudi Arabia and United Arab Emirate.

Kale, Eken and Selimler (2015) examine the effect of regulation on the performance of Turkish Banks during the period from 1997 to 2013 using data envelopment and ordinary least squares regression analyses. The study finds that tighter regulations and restrictions, close monitoring, strengthened supervision, more capital and reforms positively and significantly affects the efficiency of affected
by economic stability such that foreign banks performs better during periods of instability while domestic banks perform better in periods of economic stability.

3. Methodology

3.1. Model and Estimation Methodology

The panel Fully Modified Ordinary Least Squares (FMOLS) estimation technique is employed to investigate the effect of banking sector regulation by the CBN on the profitability of deposit money banks (DMBs) in Nigeria. The FMOLS is a recent panel data estimation technique originally designed in works by Phillips and Hansen (1990) to provide optimal estimates of cointegrating regressions. An important advantage of the FMOLS according to Pedroni (2000), is that it allows selective pooling of long-run information contained in a panel and permits the short-run dynamics and fixed effect to be heterogeneous among cross sectional units (or different members) of the panel. In additional to this, the method modifies least squares to account for serial correlation effects and for the endogeneity in the regressors that result from the existence of cointegrating relationship. This is in recognition of the fact that most times series data have some non stationary characteristics (Phillips, 1995). Thus it produces asymptotically unbiased estimators and standard normal distributions that are free of nuisance parameters.

The application of panel FMOLS estimation technique for analysis of a balance panel dataset is the major contribution of the paper the existing literature. We note that given the characteristics of the FMOLS estimators, the routinely reported R-Squared (and R-Bar-Squared) and DW-Statistics do not matter for panel cointegration estimations.

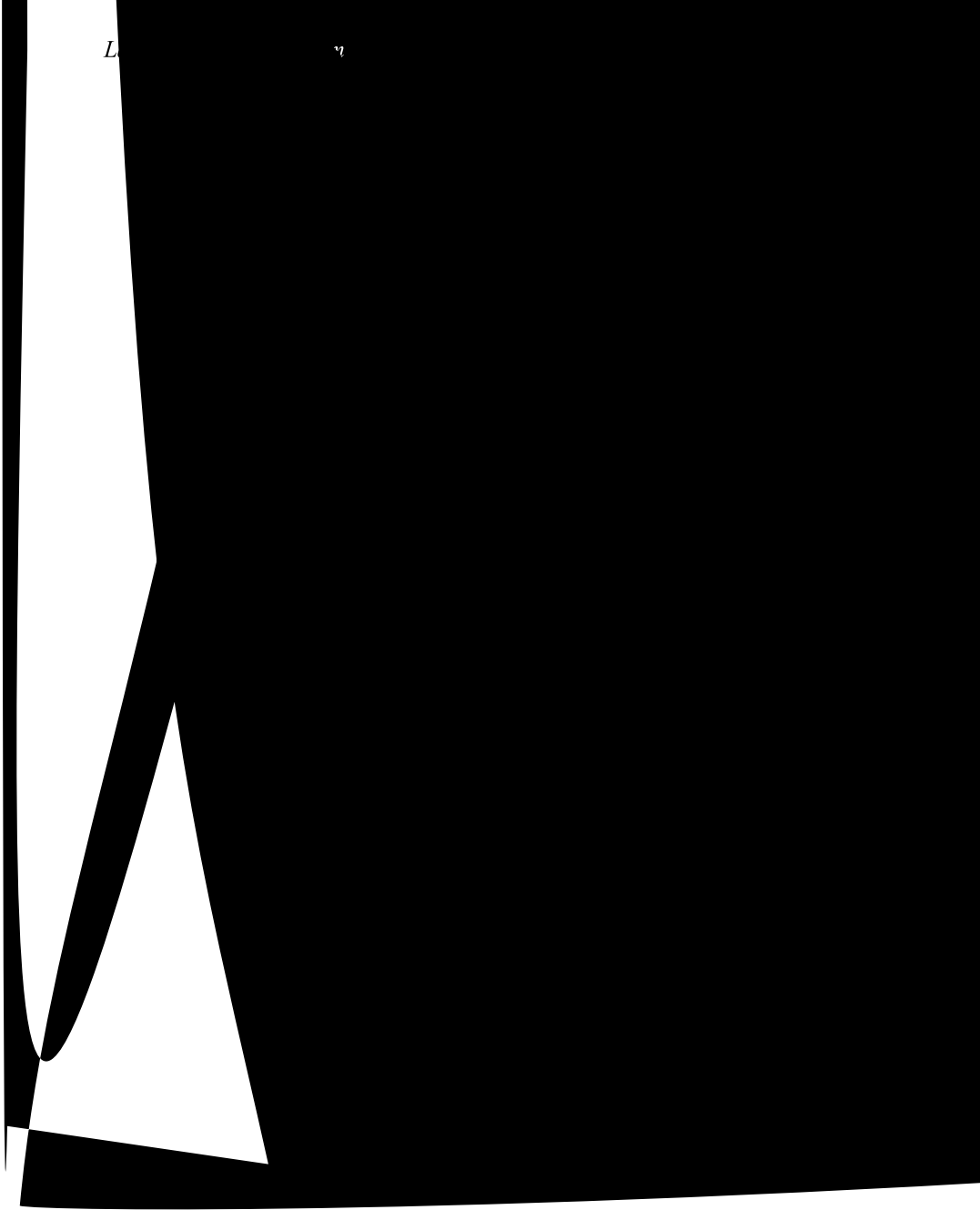
The application of the methodology begins with the panel unit root test to determine whether or not the variables are stationary. This is followed by the panel cointegration test and then, the estimation of the specified model.

The model to be estimated is specified in its functional form as:

$$ROA = f(BR, CRR, EXRT, TBR) \quad (1)$$

Where ROA = Return on Assets (proxy for performance of deposit money banks), measured as net profit/total assets*100.

BR = Bank Rate (or Monetary Policy Rate)



The panel FMOLS estimation results indicate that the signs on all the variables except one period lag of BR conform to *a priori* expectations. It also shows that all the variables are highly statistically significant even at the 1% level. Thus the selected quantitative instruments of banking sector regulation significantly affect

68 units

increase in ROA after a lag of one year. This observation which runs contrary to

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