Analysis of Financial Performance indices of Commercial Banks in Nigeria: 2005-2018

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Abstract

Analysis of financial performance indices of Commercial Banks seek to examine the various and identified indicators that influences the performance of Commercial Banks in Nigeria. The study employed regression strategy for the period of 2005-2018. The necessity for the study was against the background and need for investors to periodically assess the performance of the enterprise given the prevailing market and environmental challenges that has affected the progress and survival of organizations in the recent past. The study will enable investors keep abreast with the challenges and understand Enterprise Risk Management of their business. It reveals that there are positive relationships between performance and Management Efficiency, Monetary Policy Rate and Inflation rate variables. The study recommended amongst others that relevant authorities should ensure that Commercial Banks adhere to the Monetary Policies set by Supervising Agency and that steps should be taken to control lending in order to stabilize lending rates and monitor inflation.

Keywords: Performance indicators, Financial Performance, Management Efficiency and Commercial Banks.

Introduction

The Banking industry constitutes an important part of a country's financial system. It plays a substantial role in the overall Economic Growth and Development. Commercial Banks, apart from being a catalyst in the industrial growth of a nation, also acts to organise loan on excess cash to the deficit organization as a financial intermediary between depositors, lenders and borrowers of funds. It thus inter-connect a person who has excess cash who would have had to hunt for a person or business that has cash shortfall and to lend same to finance his business. As result of the demanding nature of such direct transactions, Commercial Banks exist to procure excess cash and loan them to persons and organizations that experience a deficit (Sethi and Bhatia, 2012). Therefore, the financial industry mobilizes savings and distributes credit as loan to the deficit sector. It enables businesses and households to deal with economic by hedging, pooling, sharing, and pricing risks. Consequently, it eases the movement of funds from the ultimate lenders to the borrowers. The movement of capitals results to advancement in both the amount and quality of actual investments, growing income per capita and increasing the living standard (Harker & Zenios, 2009). Commercial Banks are therefore, considered key elements of the financial system. It accepts different kinds of deposits and use these funds as loans in support of Capital formation and Investment. By this role, the Banks grow the productive ability of the economy and fundamentally facilitate the pace of economic development (Sethi and Bhatia, 2012, Kumar and Malhotra 2017). Performance in business refers to the degree or extent of return on investment and the ability to continuously survive and avoid shutdown. It is an important aspect of financial risk management. It measures results of a firm's policies, decisions, actions and operations in quantitative or monetary term. Differently put, is used to assess a firm's total financial health over

a given time interval. It can equally be employed to compare similar firms across the same industry or to compare industries or sectors in aggregation (Al-Oasisi 2017).

Statement of Problem.

Financial performance analysis of commercial banks evokes concern and interest to investors especially, as it influences policies and decisions that may affect the continuity and the going concern of the enterprise. Besides, investors need to take stock of the reward and monetary benefits that may accrue from their investment. Recently, the last global financial crisis which resulted from the massive derailment of financial sector in developed markets in mid-September 2008 and following the collapse of Lehman Brothers which has a knock-on effect on the global economy, there is the necessity to periodically make assessment, evaluate or take stock of the progress of the Commercial Banks in order to keep abreast and determine the goings on in the business. It is, therefore, important that attention be paid to the performance of Commercial Banks in Nigeria and to avert any possible factor that may hamper their performance hence the study. The study will examine the challenges or factors that may impede the good and efficient performance of Commercial Banks and make recommendations on areas for improvement. Thus, will assist various stakeholders such as the Central Bank, Bankers Associations, Governments Agencies, and other financial authorities to make informed decision on how to improve performance of the sector and Commercial Banks in particular.

Objective of Study

The study is to investigate the key determinants of Commercial Banks performance in Nigeria from 2005-2018. In so doing, necessary recommendation will be made for improvement where in the study inadequacy is revealed. It is also envisaged that the study will engender enhanced productivity or enriched service delivery. Precisely, it will bring about better assessment of the following variables that affect performance, namely; Asset Quality Capital Adequacy Management Efficiency Monetary Policy Rate and Inflation rate.

Conceptual Framework

Notionally, stability and performance of banks are assessed under specific prudential factors framework by employing specific gauges such as Net Interest Margin (NIM) Petria capraru and Ihnatov(2015), Pasiouras and Kosmidou(2007) and Ani et al(2012,)
Net interest income (NIM) measures the change between the interests paid by the Bank to the investors and the interest it receives from borrowers. This quotient measures how effective a bank is at investing its funds in contrast to its expenses on the same investments. A negative value signifies that the bank has not made a best investment decision if interest expenses exceed the amount of returns generated by the investment. Profitability of Commercial Banks may not be sufficiently captured with a single measure indicator because one indicator may not guarantee better performance. According to Gadanecz and Jayaram (2009) cited in Hull (2012), Central Banks such as Czech National Bank (CNB), Hong Kong Monetary Authority (HKMA), Central Bank of Turkey (CBT) and Swiss National Bank (SNB) are now measuring bank profitability and stability using multiple indices.

Performance

Performance is a measure of the accomplishment of a specific objective. It can be said to be the financial measure or how effective, reasonable, employment, management and productive use of assets of a business and how it generates incomes. There are many ways to measure performance, but all measure must be in aggregation of other similar and related indices or indicators. In the bank, performance is paramount because it tends to justify the level of investment that may have taken place. In other words, Return on Investment (ROI). The analyst or investor may wish to look deeper into the financial statements and seek out the margin of growth rates or any declining debt (Hull, 2012). Performance assessment, therefore, is considered a significant step in analysing the behaviour of the indices that will promote the investors reward. Individual assessment technique thus improves accountability strength.

Individual Performance Indicators

Capital Adequacy

Capital is one specific bank factors that impact the amount of bank profitability. Capital is the number of owners fund accessible to support the bank's operation and function as a buffer in condition of hostile situation (Athanasoglou et al. 2005). Banks capital generate liquidity for the bank since deposits are delicate and disposed to bank runs. Furthermore, higher bank capital decreases the chance of failure (Diamond, 1984). However, it is not without downsides that it encourage poor demand for liability, the economical sources of fund Capital adequacy is the amount of capital mandatory for the banks to support them survive risks such as credit, market and operational risks they are exposed to in order to absorb the possible loses and safeguard the bank's debtors. According to Deger and Adem (2011), the adequacy of capital is measured based on capital adequacy ratio. Capital adequacy ratio indicates the inner strength of the bank to survive losses during crisis. Capital adequacy ratio is directly comparative to the resilience of the bank to crisis conditions. It has similarly a direct influence on the profitability of banks by determining its growth to risky but profitable ventures or capacities (Sangmi and Nazir, 2010).

Asset Quality

Asset quality is additional bank specific variable that influence the profitability of a bank. The bank asset consists among others of current asset, credit portfolio, fixed asset, and other investments. Regularly an increasing asset (size) is associated to the age of the bank (Athanasoglou et al., 2005). Furthermore, the loan of a bank is the key asset that produces the main portion of the bank's income. Loan is the key asset of Commercial Banks from which they generate income. The loan portfolio quality defines the profitability of banks. The loan portfolio quality has direct bearing on bank performance. The main risk a bank experiences is the losses resulting from delinquent loans (Hull, 2012). Therefore, nonperforming loan quotients are the best representations for asset quality. The main concern of every Commercial Bank to retain the volume of nonperforming loans to small level. This is so since large nonperforming loan impacts the performance of banks. Consequently, small amount of nonperforming loans to total loans indicates healthy loan portfolio of a bank. The smaller the ratio the better the performance of the bank (Sangmi and Nazir, 2010).

Management Efficiency

Management Efficiency is one of the main bank specific factor that define bank profitability. It is proxied by net profit to number of employees, total loans to number of branches, total deposit to number of branches and non-interest expense to gross expense. Furthermore, operational efficiency in running the operating expenses is another dimension for management quality. Management performance is often stated qualitatively through staff quality subjective evaluation of management systems, organizational discipline, and control systems, among others. The competence of the management to deploy its resources competently, income maximization, decreasing operating expenses is very important for the performance of a bank. Yakubu, (2016) Sangmi and Nazir (2010), and Khrawish(2011) stated that the higher the operating profits to total income (revenue) the more efficient the management in terms of operational efficiency and income generation. Management quality in this regard, defines the level of operating expenses and in turn impacts profitability (Athanasoglou et al. 2005).

Monetary Policy Rate

The MPR is the official interest rate of the Central Bank of Nigeria which anchors every interest rate in the money market and the economy. CBN's statement on the MPR affects the level of financial activities and prices in the economy through several channels.
Monetary policy involves the use of monetary tools to adjust or control the amount, the cost, the availability and the passage of money and credit in an economy to achieve some macroeconomic objectives such as stability of price, full employment and sustainable economic development (Emmanuel & Sunday, 2012). Banking system is seen as the most important strait of implementing monetary policy. The monetary tools consist of discount rate, open market operation, reserve requirements, etc. however, they do not directly impact economic activities. They impact economic activities through their impacts on accessible resources in the banking sector. For instance, when the economy experiences inflationary pressure. The Central Bank can employ contractionary monetary policy to relax the price level. This may be carried out by increasing the required reserve ratio and discount rate. Thus, will then shrink the loanable funds available to Commercial Banks. In so doing, cost of borrowing will increase, loans will become expensive and individuals will borrow less. Total spending and investments will drop. Furthermore, as a result of high interest rates, banks' deposits become more pertinent as they offer better returns on savings. Consequently, individuals will tend to save more and spend less. On the contradictory, if the intention is to increase the total demand in the economy, the reserve ratio and discount rate may be reduced. It often happens that as the borrowing cost drops, it will become stress-free for individuals to meet with the cost of loans as investments will then grow in the economy. Nevertheless, this result to more employment opportunities hence, individuals will start to spend more than usual (Mishkin 2013). Several experts have argued that the Monetary Policy directly influences bank performance. In order to make profit, for instance, Commercial Banks invest customers' deposits in different short-term and long-term investments. However, the core of such deposits is used for loans. Consequently, the more loans and advances they grant to borrowers, the more profit they make (Zanan et al, 2014). When the central bank embarks on contractionary monetary policies, it reduces the accessible funds with the Commercial Banks. This accordingly reduces their ability to make profit. On the contrary, expansionary monetary policies would have inverse impact.

Inflation Rate.

This captures the aggregate percentage growth in Consumer Price Index (CPI) for all goods and services. Inflation impacts the real value of costs and incomes. Inflation and profitability may have positive or negative association depending on if it is anticipated or unanticipated (Perry, 1992). In finance literature, most of the studies observe a positive relationship between inflation and profitability (Bourke, 1989; Molyneux and Thorton 1992; Kosmidou, 2006).

Theoretical Review

Capital Adequacy Buffer Theory:

Banks like other Firms need Capital to function efficiently. Banks are generally very much regulated and carry more highly risky assets and liabilities. The issue of what constitute adequate capital is a fact of long historical debate. The goal of safeguarding bank capital is to endure and absorb monetary and macro-economic shocks, which bank activities, is extremely sensitive to. However, banks may desire to hold a buffer of additional capital to reduce the possibility of falling below the legal capital requirements, particularly if the ratio of their capital adequacy is very unstable (Ikpefan, 2013). Capital adequacy has in modern time gone past banking supervision tool and transformed to a monetary policy instrument of achieving financial stability. Section 7 (2) of BOFIA maintained that every bank that fail to meet the required capital adequacy within such time as may be defined by the CBN shall be a reason for withdrawal of license. Section 13 maintained that bank shall keep at every time capital funds unhindered by losses in such ratio to each or any assets or to all or and also liabilities or both such liabilities and assets of the bank and each its branches in and outside the country as may be detailed by CBN. The withdrawal of some banks license in 2005 after the consolidation and recapitalization restructurings were based on these sections (Lucky and Akanni, 2015). According to Nzotta (2004), the capital adequacy buffer theory predicts that a bank approaching the mandatory minimum capital requirement may have the temptation to increase capital and decrease risk in order to escape the regulatory costs prompted by gap of the capital requirement. The failure of some Banks in Nigerian has been traced to high-risk taking in addition to low capitalization.

International Fisher Effect Theory:

The Fisher Effect is an economic theory created by economist Irving Fisher that defines the association between inflation and both real and nominal interest rates. The Fisher Effect maintains that the real interest rate equals the nominal interest rate less the projected inflation rate. Thus, real interest rates drop as inflation increases, except nominal rates rise at the same rate as inflation.

Fisher's equation reflects that the actual interest rate can be given by deducting the anticipated inflation rate from the nominal interest rate. In this equation, all the available rates are compounded. The Fisher Effect can be understood every time you go to the bank; the interest rates an investor has on a savings account is the nominal interest rate. For instance, if the nominal interest rate on a savings account is 4% and the expected rate of inflation is 3%, then the money in the savings account is really growing at 1%. The smaller the real interest rate, the longer it will take savings deposits to grow significantly when observed from a purchasing power perspective. The Fisher Effect has been stretched to the analysis of the money supply and international currencies trading. Nominal interest rates and real interest rates nominal interest rates reflect the financial return an individual gets when he deposits money. For example, a nominal

interest rate of 10% per year means that an individual will receive an additional 10% of his deposited money in the bank. Different the nominal interest rate, the real interest rate reflects purchasing power in the equation. In the Fisher Effect, the nominal interest rate is the provided actual interest rate that reflects the monetary growth padded over time to amount of money or currency owed to a financial lender. Real interest rate is the amount that mirrors the purchasing power of the borrowed money as it grows over time. The Fisher Effect is more than just an equation: It indicates how the money supply influences the nominal interest rate and inflation rate as a tandem. For instance, if a change in a central bank's monetary policy would push the country's inflation rate to increase by 10 percentage points, then the nominal interest rate of the same country would follow suit and rise by 10 % points as well. In this light, it may be presumed that a variation in the money supply will not affect the real interest rate. It will, therefore, reflect directly changes in the nominal interest rate (Madura 2012).

Efficient Structure Theory:

The efficient structure theory states that banks with more efficiency (better management, technologies and applies cost control) have lower costs, higher profits and larger market share. It further argued that the difference in profitability between banks is not generated by differences in the quality of management, but by differences in the level of scale efficiency at which a bank is operating. In other words, the ESS hypothesis states that some banks achieve better scale of operation that result to reduced costs. Lower costs result to higher profit and faster growth for the scale-efficient banks (Noztta 2004).

Empirical Review

Linh and Bui (2015) investigated the factors that affect the profitability of commercial banks in Vietnam. They used data from the audited published accounts of 22 commercial banks in Vietnam for the period of 2007 to 2013. They measured profitability with return on assets (ROA), return on equity (ROE), and net interest margin (NIM). The findings indicate that the equity to total assets ratio (CAP), loans to total assets ratio (LOAN), liquid assets to total assets (LA), and the economic growth rate (GDP) have effect on the profitability of Commercial Banks in Vietnam.

Dash and Das (2013) compared the financial performance of public sector banks with private/foreign banks using the CAMELS framework. They established that private/foreign banks fared better than public sector banks on most of the CAMELS factors in the study period, and that the two contributing factors for the better performance of private/foreign banks were Management Soundness, Earnings and Profitability. Erina and Lace (2013) found interconnection between bank specific factors and macroeconomic indicators in the Latvian commercial banks for period 2006–2011. The authors carried out a survey of scientific literature and examined the profitability indicators of commercial banks applying descriptive statistics, data correlation and regression analysis. Based on the results gotten, the authors established that profitability has had a positive impact on operational efficiency, portfolio composition and management. Whereas, it has a negative impact on the capital and credit risks, as measured by ROA, while according to ROE, positive effect is applied on structure of the capital portfolio and negative effect on operational efficiency and credit risk. Regarding macroeconomic indicators, the authors discovered that GDP growth rate has a positive effect on profitability as measured by ROA and ROE. The authors, with the methodology used in their research, have established that not only profitability indicators of some

commercial banks, but also have compared the performance indicators of several banks. Ihenetu & Iwo (2017) investigated the performance of banks in Nigeria using CAMEL rating. 19 years' data was collected and analysed using the ordinary least square and the result revealed that capital adequacy, management efficiency; earning and liquidity have no significant effect on the profitability of the banks studied. Assets quality has a negative effect on the profit of the banks studied. They recommended that the banking industry in Nigeria should generate enough capital to run the business through sales of shares, debt, investment, retain earning etc. to boast their profit, they should also improve their quality of assets and ensure that their assets are more of performing rather than non-performing assets. Ngerebo-A (2016) conducted a research on monetary policy and inflation in Nigeria. The research used a time series data from 1985 to 2012. Multiple regression was the statistical tool employed with the support of Software Package for Social Sciences (SPSS). The finding among others disclosed that credit to private sector (CPS) is statistically significant in the stating of changes in inflation rate, which was employed as proxy for the economy. They recommended that credit to private sector should be appropriately channelled and directed by the appropriate authority (CBN) to deter surplus money in circulation that will result to inflation.

Olalekan and Adeyinka (2013) investigated the impact of capital adequacy on profitability of commercial banks in Nigeria. The study examined the effect of capital adequacy of both foreign and domestic banks in Nigeria on their profitability. The research employed primary data collected by questionnaires distributed to employees of banks, comprising a sample of 518 respondents with a response rate of 76%. In addition, the authors used the secondary data form the published Financial Statements of Banks for the period 2006–2010. The findings of the study from the primary data analysed disclosed no significant relationship but the secondary data analysis showed a positive and significant relationship between capital adequacy and bank profitability. This suggests that commercial banks, capital adequacy plays a major role in the determination of their profitability. Ani, et.al (2012) examined the determinants of profitability of commercial banks in Nigeria for the period of ten years from 2001 to 2010. Pooled ordinary least square was applied to evaluate the coefficient. Study found that bank size does not increase the profit of any Commercial Banks and that higher capital adequacy ratio increases the profitability of banks.

Research Methodology

This section deals with the presentation of research method used in the research viz: collection of data, statistical technique and analysis. It also dealt with the description, explanation and rationalization for the method used in collection of data. In order to realize the set goals of a research work and achieve reliable and trustworthy result, the choice of proper methodology is very vital. This is because Easterby-Smith Thorpe and Jackson (2012), stated that research questions and objectives determine the choice methodology.

Research Design

Research design is a summary of methods and approaches adopted by a researcher to syndicate different components of study in a logically rational manner so that the research problem is adeptly addressed. It provides understandings regarding how to conduct research employing a specific methodology (Kothari, 2004). The research design used in this research be defined as quasi- experimental. A quasi experiment is an empirical interventional study used to investigate the causal impact of an interference on target population devoid

of random transfer to conditions or orders of condition. Since the independent variable is manipulated before the estimation of dependent variable, quasi-experimental research decreases the directionality problem. They are often carried out to measure the efficiency of a treatment (Easterby-Smith Thorpe & Jackson 2012). This research design predominantly goes with this research because of its communicative and narrative nature.

Dependent Variables

The dependent variable adopted for this study and proxy for Commercial Banks performance is Net Interest Margin (NIM).

Independent Variables

The independent variables for the study are Capital Adequacy, Asset Quality, Management Efficiency, Monetary Policy Rate (MPR) and Inflation rate.

Population of Study

The population of study comprise of the Commercial Banks quoted on the Nigerian Stock Exchange as at 31st December 2018.

Model Specification

$NIM = \beta 0 + \beta 1x1 + \beta 2\ x2 + \beta 3x3 + \beta 4x4 + \beta 5x5 + \mu$

Where:

$\beta 0$ = Intercept or Constant Term

$\beta 1x1$ = Asset Quality (AQ), Measured by

$$\frac{Non-performing\ loans}{Total\ loans} \qquad \frac{Total\ loan\ loss\ provision}{Total\ loan}$$

and

$\beta\ 2x2$= Capital Adequacy(CAR), Measured as

$$\frac{Tier\ 1\ plus\ tier\ 2\ capital}{Risk\ weight\ assets} \qquad \frac{Total\ capital}{Total\ asset}$$

and

$\beta\ 3x3$= Management Efficiency (MGTE) Measured by

$$\frac{Net\ profit}{No.of\ employees} \qquad \frac{Total\ deposit}{Numberof\ branches} \qquad \frac{Non-interest\ expense}{Gross\ expense}$$

and $\dfrac{Total\ loans}{Numberof\ branches}$

B4x4 =Monetary policy rate (MPR) Measured by Annual Monetary Policy Rate

B5x5= Inflation Rate (IFR), Measured by Annual Inflation Rate
μ = Error Term
following β1 –β 5 = Coefficients of the Independent variables

Data Presentation

Data obtained from secondary sources were computed and presented below. The parameters were plugged in the developed equation in the manner established above.
The corresponding analysis are reviewed using the afore-stated parameters and discussed in that light.

Statistic	**Net Interest Margin**	**Asset quality**	**Capital adequacy**	**Management efficiency**	**Monetary Policy rate**	**Inflation Rate**
No. of observation	84	84	84	84	84	84
Minimum	5.6000	27.0000	1.4900	37.9650	6.0000	6.6000
Maximum	10.9200	41.2000	17.7000	85.6615	14.0000	18.5000
Mean	7.5343	34.4950	10.8971	65.5557	11.1786	11.4786
Standard deviation (n-1)	1.2970	4.8646	4.3848	14.7139	2.6301	3.3494
Skewness (Pearson)	-1.2832	-0.2085	-0.4465	-0.6660	-0.8194	0.4957
Kurtosis (Pearson)	1.5179	-1.3027	0.1782	-0.6475	-0.3397	-0.4818

Source: Author`s Computation and Stamatis 22.1 Output (2019).

The arithmetic mean:

Making an allowance for the yearly period (2005 – 2018) used for this study, the minimum net interest margin was 5.60% and maximum exchange rate was 10.92%. Nevertheless, the mean of some the variables like inflation rate was 11.48%, whereas the minimum inflation rate stood at 6.6% and the maximum inflation rate was 18.50%. Also, the average of capital adequacy was 10.90%, while the minimum capital adequacy was 1.49% and maximum capital adequacy ratio was 17.70%. In addition, the average monetary policy rate was 11.18%, while the minimum monetary policy rate was 6.00% and maximum monetary policy rate was 14.00%.

Standard deviation:
The standard deviation from the mean of net interest margin was 1.30%, the standard deviation of asset quality was 4.87%. Also, the standard deviation of management efficiency was 14.71%.

Skewness:
The distribution of the variables showed that some are positively skewed to the right

Kurtosis:
Kurtosis values of all the variables are less than 3.0; this suggest that their curves are leptokurtic in nature.

Test of Normality of Variables

Jarque-Bera Test of Normality Computations for, Net Interest Margin (NIM), Asset Quality (ASQ), Capital Adequacy (CAR), Management Efficiency (MGF), Monetary Policy Rate (MPR) and Inflation Rate (INF).

Result of the Jarque-Bera Test of Normality for Performance and Selected Variables are presented as follows:

Variable\Test	Jarque-Bera
(NIM)	0.0748
(ASQ)	0.5794
(CAR)	0.7851
(MGF)	0.5275
(MPR)	0.4418
(INF)	0.7016

Source: Author's computation and Stamatis 22.1 Output (2019).

Test of Normality of Variables:
Estimated Net Interest Margin Model

Source	Value	Standard error	T	Pr > |t|
Intercept	17.9276	10.9648	1.6350	0.1774
ASQ	-0.1705	0.2461	-0.6927	0.5266
CAR	-0.0541	0.1673	-0.3234	0.7626
MGF	-0.0357	0.0844	-0.4235	0.0332
MPR	0.4146	0.2490	1.6649	0.0013
INFR	-0.0843	0.1999	-0.4217	0.0150

Source: Author's computation and Stamatis 22.1 Output (2019)

Therefore **model 3**, the net interest margin model is:

NIM = 17.92757-0.17047*ASQ-0.05411*CAR-0.03575*MGF+0.41459*MPR-0.08430*INF

Test of Autocorrelation

Durbin-Watson Statistic of the Net Interest Margin Model

Durbin-Watson stat	2.2030

Source: Author's computation and Stamatis 22.1 Output (2019).

H_0 : There is no positive autocorrelation in the model

H_A : There is a positive autocorrelation in the model

Decision: Since the Durbin-Watson statistic value of 2.2030 which is close to 2 showed no presence of positive autocorrelation in the model. Therefore, the null hypothesis is accepted, and the alternative hypothesis rejected.

Test of Multicollinearity

H_0 : There is no presence of linear relationship among the explanatory variables in the model

H_A : There is a presence of linear relationship among the explanatory variables in the model.

The variance inflation factor for the return on equity model is:

$$\text{VIF}(\hat{b}_5) = \frac{1}{1-R_5^2} = \frac{1}{1-0.24}$$

$$\frac{1}{0.76} = 1.3158$$

Decision: Since the Variance Inflation Factor value of 1.3158 is less than 10, it shows that there is no presence of linear relationship among the explanatory variables in the model. Therefore, the null hypothesis is accepted, and the alternative hypothesis re

The Standardized Residual Normality Tests (SRN)

The standardized residual normality test (SRN) is used to evaluate the stability of the models when applied on the residuals. The SRN statistic is based on the residuals from the net interest margin model Under the null hypothesis of perfect parameter stability, the residuals from the model are expected to follow a normal distribution at $\alpha = 0.05$. From the SRN plots, the residuals followed a normal distribution since the p-value (0.2331) of the Jarque-Bera test is greater than the critical value of 0.05. This means that the model is stable, and therefore it can be used for policy formulation.

Stability of the Models:

The stability of the estimated NIM model was assessed for model adequacy using the standardized residual normality test (SRN). The model was highly stable and can be used for policy making and forecasting purposes.

Discussion of Findings

The aim of this study is analyzing the determinants of financial performance of Commercial Banks in Nigeria measured by net profit margin. The estimated coefficient of the model (R^2) of 0.6197 which indicates a 62% of total variation in net interest management of Commercial Banks can be explained by the explanatory variables.

The F-Statistic (0.7242) with p-value (0.0353) showed that the all the selected performance determinants jointly have effect on net interest margin of Commercial Banks in Nigeria. This outcome is in line with our expectation and the result is consistent with the findings of Ashraf Zeeshan and Huhammad (2017) and Ayanda Ekpo and Mustapha (2013).

Given the adopted variables, the estimated coefficient (-0.1705) of asset quality showed a negative sign but not statistically significant. High level of nonperforming loans suggests high credit risk and poor asset quality management in the banks. It decreases interest income and increases provisioning costs, therefore reducing profits of a bank. Banks tend to be more profitable when they can embark on more lending activities, however because of the credit quality of lending portfolios and the general practice in Nigeria a high level of provision is required. Such a high level of provision for non-performing loans against total loans negatively affects banks' profitability. This finding is consistent with the empirical evidence of Athanasoglou et al. (2005), who found that the loan-loss provisions to loans ratio (credit risk) negatively and significantly influence banks' performance.

Likewise, the estimated coefficient (-0.0541) of capital adequacy ratio showed a negative sign and it is not statistically significant. This indicates that any increase in capital position results to a decrease of profit. This is consistent with the traditional argument that larger capital adequacy ratio inspires banks to invest in safer assets, like low risk loans or securities which may affect performance(Boadi 2015) This is contrary to our a-priori expectation but consistent with findings of Menicucci et al., (2016), Garcia et al., (2016), and Tariq et al, (2014) and the capital adequacy buffer theory which maintained that a bank approaching the mandatory minimum capital requirement may have an inducement to increase capital and decrease risk in order to escape the regulatory costs prompted by a gap of

capital requirement. The failure of some Banks in Nigerian has been traced to high-risk taking and low capitalization (CBN, 2016). Since capital plays the role of a buffer, increasing capital adequacy decreases the necessity for external funding. So, reducing outside funding costs and also reducing the prospect of bankruptcy costs. This argument supports the empirical findings in Dietrich and Wanzenrid (2009), Bourke (1989), DemirgucKunt and Huizinga (1999), Goddard et al. (2004), and Pasiouras and Kosmidou (2007).

In addition, the estimated coefficient (-0.0357) of the management efficiency is negative signed, but statistically significant. Therefore, a unit increase in management efficiency will decrease net interest margin of commercial banks in Nigeria by 0.04 units. This outcome does not support efficient-structure theory which states that the difference in profitability between banks is not generated by differences in the quality of management, but by differences in the level of scale efficiency at which a bank is operating. In other words, the ESS hypothesis states that some banks achieve better scale of operation that result to reduced costs. Lower costs result to higher profit and faster growth for the scale-efficient banks. This finding is also contrary to the argument of Molyneux, and Thornton, (1997) that higher efficiency is anticipated to result to better financial products and services, a higher amount of profit. This summarizes that efficiency plays an important in describing the forces behind banks performance.

Similarly, the estimated coefficient (0.4146) of monetary policy rate showed a positive sign and statistically significant. This means that 1% increase in monetary policy rate will cause net interest margin to increase by 0.42 units. When the Central Bank makes a pronouncement on the MPR, it influences the outlooks of individuals and economic agents concerning the future course of the economy. Such decisions likewise influence the prices of financial assets such as shares and the exchange rate of the naira to other currencies as well as the capacity of individuals and economic agents to save and spend money. This also support the Fisher effect theory and consistent with findings of Tomuleasa (2014) fehrrouhi (2017) Maigua and Mouni (2016) and Ozgur and Gorus (2016).

However, the estimated coefficient (-0.0843) of inflation rate showed a negative sign and it is statistically significant. At any rate, 1% increase in inflation rate will cause net interest margin to decrease by 0.08 units. A negative relationship between inflation and banks' profitability would submit that banks in Nigeria are not able to predict the future changes of inflation appropriately and promptly enough to adjust interest rates and margins. This since inflation can influence, the value of money purchasing power and real rate of interest. From this conclusion, wrong projection of inflation can be negative on bank's profitability. The result of negative relationship of inflation with profitability is consistent with that of Khrawish, (2011) Saeed, (2014) and insignificance of inflation is found to be consistent with that of (Demirguc-Kunt and Huizinga (1999) Naceur (2003). However, this is contrary to the finding of Akomolafe et al. (2015) who established that there is a positive relationship between banks profits and the monetary policies in Nigeria.

Summary

From the findings of this study, performance determinants of Commercial banks in Nigeria are and may not be limited to the following tested variables; Management efficiency, Monetary Policy Rate and Inflation Rate. However, Asset Quality and Capital Adequacy did not impact on Commercial Banks performance.

Conclusion

Performance is a guide and standard for assessing operational competence of management and the Commercial Banks as the case with this research.

Based on the findings, recommendations and arising from the analysis of data generated for the research, it is obvious that the statement of problems of the research, the objectives stated in the introductory section the study has been dealt with. The following sections as well contributed to the result. It is expected that appropriate authorities, organizations and institutions to whom this research apply or relate will implement its result for economic growth and banking sector sustenance.

Recommendations

It is not gain saying that arising from our research, Management Efficiency resulting from capacity building due to training and retraining coupled with good leadership, invariably increases performance. Thus, Bank Management should promote efficiency in the management of the affairs of Banks. Central Bank of Nigeria should stiffen their flanks and guarantee stern adherence of its monetary policies by Commercial Banks. This is premised on the fact resulting from this research that monetary policy rate impacts positively the performance of Commercial Banks. Since there is a link between inflation and Commercial Banks performance, appropriate authorities should take necessary steps to control the lending rate of Banks. In so doing, cost of funds of Commercial Banks will be checked.

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