Does the introduction of Treasury Single Account (TSA) improve on the performance of Deposit Money Banks in Nigeria?

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ABSTRACT
The study examined the impact the introduction of the Treasury Single Account has on the performance of some deposit money banks in Nigeria. The study employed Panel data model in its analysis with focus on three deposit money banks in Nigeria. The scope was between 2004 to 2019. The findings show that the withdrawal of Federal government accounts from deposit money banks have positive and significant impact on the asset quality but negative and non-significant impact on the total capital and total deposit of these selected Nigerian banks. It is therefore recommended that managers of banks be proactive and embrace core banking practice in their intermediary roles for improve performance and economic growth.

Keywords: Treasury, Single, Account, Deposit, Money and Banks

INTRODUCTION
The introduction of the treasury single account (TSA) and the saving of five billion naira as a consequence by the then government of Goodluck Jonathan in 2012 was said to have resulted into passing into law such directives for its full implementation in 2015 by the succeeding regime [1,2,3]. Treasury Single Account was a public accounting system that was brought into public space to enhance transparency and accountability in the management of public funds and grow the economy [4,5,6]. Prior to its coming into effect, banks in Nigeria were said to be taken advantage of cash balances in the MDA accounts scattered in such banks while government went about a borrowing both within and outside in other to execute some development projects [7,8,9,10]. But with the implementation of this policy, ministries, departments and agencies balances that were hitherto at the beck and call of these banks were mopped up and transferred to government account domiciled with the Central Bank of Nigeria thereby hampering the intermediation role banks play in an economy. Unarguably, economic status of any nation depends on the development of its banking system. Banks are the catalysts upon which other economic activities revolve [11,12,13,14]. They also provide other important benefits to the community and facilitate the objectives of financial liberalization. Banks are central to the efficient payment system and the means by which monetary policy of government is implemented [15,16]. On the other hand, the introduction of a treasury single account by government is said to be a precondition for efficient fund management and a productive instrument for the ministry of finance/treasury to establish oversight and centralized control over government’s cash resources [17,18]. This is due to the fact that treasury single account ensures accountability of government revenue, enhance transparency and prevent expropriation of public funds. Through this bank account or set of linked bank accounts, government transacts all its receipts and payments and gets a
Treasury single account is said by [21] to have occupied a sizeable part of global public sector accounting and finance in the past two decades. It is the functioning of the system of budget execution that is carried out taking into account a number of fundamental and traditional principles that include but not limited to the organization and building of a budget system. Some of its basic principles as reflected in the legislation of some federal and unitary states include sources of financing the deficit budget, budgeting transparency and the principle of separation of revenues and expenditures among others. Again, [22], posits that treasury single account is a public accounting system that contains all government revenue, receipts and income that is usually maintained by the country’s Central Bank and through which all payments are made. [23], posits that the implementation of TSA by each country depends on the stage of the quality of its institutions and financial development and communications infrastructure and the degree of maturity of its banking system. [24] posits that in the implementation of TSA, government agencies are not to operate bank account outside the purview and oversight of the treasury. [25], argues that treasury single account as a public accounting system uses a single account or a set of linked accounts by government to ensure that all revenue receipts and payments are done through a consolidated revenue account of the Central Bank of Nigeria. [26], argue that treasury single account is a unified structure through which government bank accounts are consolidated for optimal use. [24], regards TSA as one of the financial policies of government for the consolidation of all revenues from all ministries, departments and agencies in the country through deposits in commercial banks into a single account at the Central Bank of the country. [20], is in agreement TSA is e-collection initiative that will automate revenue collection of ministries, departments and agencies directly into federal government independent consolidated revenue fund account of CBN through the remita e-collection platform and other electronic payment channels. [16], explain that Treasury Single Account (TSA) is a network of subsidiary accounts all linked to a main account such that, transactions are impacted in the subsidiary accounts but closing balances on these subsidiary accounts are transferred to the main account, at the end of each business day. The implication according to [14] was that TSA will provide for proper monitoring of government receipts and expenditure and its implementation will help to block most, if not all, the leakages that have been the bane of the economy.

LITERATURE REVIEW

Although banking institutions is said to have become increasingly complex, earnings and efficiencies are some of the driving force of their performance [12] argues that profitability is still the determinant of efficiency of firms despite some arguments against its use to determine profitability. The solvency of a bank is therefore at risk when its assets become impaired. The quality of assets is needed to be evaluated to know their ability and performance. Credit risk is the risk of default in loan repayment and is inherent in lending which is the major banking business. Indicators of the evaluation of assets According to [11] include: Managerial Quality: It measures the competence of the staff and management of a bank which can be deduced from the performance indices. However, [14] posits that it is necessary to check qualifications (Academic and Professional) as well as experience of the top management as banks with quality staff will be more efficient and be less likely to drift towards distress. Added to
that is the quality of bank deposit which is measured by taking the natural log of the total banking sector deposits for the period. This according to [10] is that in any deposit insurance scheme, the

Capital Adequacy

This determines how well banks can cope with shocks on their balance sheets. It measures the bank’s solvency. Capital adequacy of a bank is measured in relation to the relative risk weights assigned to the different categories of assets held both on and off balance sheet items [8]. [7], posits that capital adequacy allows a bank to absorb losses and still keeps running its daily business operations even under financial distress condition. This work is therefore anchored on these works with slight modifications. Three ratios are often used to evaluate capital adequacy.

a. Equity /total assets
b. Equity /total loans
c. Equity + loan loss reserve /losses.

TSA Policy appears to be Counter-productive

There is currently a debate on whether the motive of TSA policy could achieve the intended motive of stemming the tide of corruption identified mostly in the ministries, departments and agencies (MDAs), through the adopted approach so as to yield the expected result. According this school of thought, the approach currently adopted by the government will squeeze the utility flow as banks may no longer be in a position to perform its primary function of providing funds to stimulate businesses and economic growth. Arguing further, they posit that the cost of capital may be at the double digit as funds may no longer be available for economic activities. Contrary to this, the other school of thought argues that government’s anticipation would be realized so long as the players play to the rule and the government agency responsible lead by example bearing in mind that the challenge posed by the TSA directive is not compliance, but how many of these government agencies are religiously committed to actually remitting accurate account of receipts/transfers to the treasury single account domiciled at CBN as the true income generated. It is in view of this that this researcher steps forward to evaluate how far the introduction of treasury single account will impact on the performance of three listed deposit money banks in Nigeria so as to be guided in the debate [3].

Treasury Single Account (TSA) and the Banking Industry

In Nigeria, commercial banks have been the custodians of government funds with which they do on-lending activities to earn profit [5]. Banks also discharge other activities to the society. Therefore, with the introduction of treasury single account, banks will be deprived of the free flow of funds from ministries fragmented, hitherto, in various commercial bank accounts. Indeed, it is estimated that commercial banks hold about N2.2 trillion public sector funds at the beginning of the first quarter of 2015 which helped to boost the liquidity base of banks in the financial economic sub-sector. It will be obvious to note that the lending portfolio of some deposit money banks in the sector may be adversely impaired when such huge amount of money leaves the system into a consolidated at the central custody of the Central Bank. On the other hand, when one considers the fact that each time the monthly federal allocation is released, the banking system is usually awash with liquidity, and as soon as this public sector fund dries up, the result is liquidity problem with an increase in interbank rates. The banks must be affected, when such high revenue generating parastatals like the NNPC moves out of commercial banks [8]. Commercial banks will be tremendously affected by the Treasury Single Account policy. This would cause insufficiency of available cash dispersal in the banking system, thereby resulting to the surge in money market for rescue as a source for funds at unfriendly rates to contain their liquidity shocks. In the study conducted by [8], the major challenges hampering the impactive and efficient implementation of the Treasury Single Account (TSA) policy also pointed to the inability of federal government to remit appropriately to the
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various MDAs, uncertainties underlying federal government inactions. With the high Monetary Policy Rate at 13%, Cash Reserve Ratio (CRR) at 20% and 75% available for private and public sector deposits respectively, the implementation of the Treasury Single Account policy would not be favourable to banks. Consequently, the policy will unwittingly compel the banks to realign their operational strategies and focus targets now on funds mobilization on the real sector of the economy, rather than placing much attention on Federal Government projects, Oil & Gas Transactions, Forex dealings, etc. Any commercial bank that fails to operate based on the core banking functions for which they were licensed must definitely close shop. This will cause heavy downsizing of staff, thereby increasing the unemployment rate in the country. Managements of banks should understand the aim of establishing banks. The Government establishments (MDAs) are not the only clients of banks. The issue of banks chasing government money at the expense of other clients especially in the sector of the economy is a questionable commentary on the performance of the banks [9]. The full implementation of the TSA will certainly reduce the banks’ net liquidity position and hence constrain their ability to create credits and this will invariably affect their profitability [10]. The full implementation of the TSA will not be hurting banks. It will only hurt establishments that purport and pretend to be banks but have failed, refused and neglected to understand banking and do what bankers do elsewhere. It is an opportunity for banks to refocus on the original purposes for which they were set up to collect depositors’ funds, keep them safe; engage in intermediation to create wealth and jobs in the economy and earn profit for themselves [2].

Stakeholder Theory

It assumed that adoption of Treasury Single Account by the federal government is as a result of the pressure from stakeholders/citizens majorly against the endemic corruption that had apparently crippled the volume of revenue returns by the government Ministries, Departments and Agencies in the treasury. It suggested that the government will responds to the concerns expressed by some powerful stakeholders/citizens in strategic opinions and expectations for the government to respond positively to the desired changes being anticipated. Stakeholders’ theory provides rich insights into the factors that motivate government in relation to the adoption and implementation of Treasury Single Account.

Public Finance Management Theory

In Nigeria, this theory assumed that all aspects of financial resources, mobilization and expenditure should be well managed in government for the benefits of the citizenry. It is on the basis of this trust that the citizens feel obliged to respect the duty of payment of taxes and levies as obligations owed to the governments in the country at all levels. It includes resources mobilization, prioritization of programmes, the budgetary process, efficient management of resources and exercising control to guard against threats. Treasury Single Account (TSA) primarily is to avoid misapplication of public funds through connivance, diversion, embezzlements, misrepresentation of financial facts and other fraudulent acts that perennially occur in government establishments.

Modern Money Theory (MMT)

It a theory that explains how sovereign governments are expected to operate responsibly on monetarily matters in order to sustain public confidence and appreciably make their positive impacts on the economy. It shows that it is relevant to aggregate the views of the citizenry in good governance. This study adopted Stakeholder Theory which suggested that the government will responds to the concerns expressed by some powerful stakeholders/citizens in strategic opinions and expectations for the government to respond positively to the desired changes being anticipated.
Data and Method

The study utilized secondary data that were extracted from the Central Bank of Nigeria (CBN) Statistical Bulletins and the Nigeria Deposit Insurance Corporation financial reports for the period of this study.

Model Specification

The study sought to establish the impact the introduction of treasury single account has on the performance of deposit money banks in Nigeria with focus on capital adequacy, assets quality and bank deposit liability as dependent variables, while TSA as proxied by the deposits of the Federal government of Nigeria is the independent variable and Broad money and inflation were control variables. The following symbols were used to denote the model:

\[ Y = a + b X + CV + \beta_1 X_1 + U_t \]

Where:
- \( Y \): Dependent variables
- \( X \): Independent variable
- \( U \): Error or disturbance term
- \( t \): Time
- \( CV \): Control variable

The following symbols are used to denote their respective variables.
- \( FG \): Federal government deposit
- \( TCA \): Total capital adequacy
- \( TBD \): Total Bank deposit
- \( TAQ \): Total Asset quality

A priori expectation: It is expected that \( \beta_1 - \beta_3 < 0 \)

However, in writing the model equations in line with the hypotheses stated

Hypothesis One

\[ H_0: \text{The presence of Treasury Single Account had no significant impact on the quality of bank deposits in DMBs in Nigeria} \]

\[ H_1: \text{The presence of Treasury Single Account had significant impact on the quality of bank deposits in DMBs in Nigeria.} \]

The model expressed in the hypothesis is represented as follows:

\[ TBD = a + b FG deposit + INFR + M_2 + n + e \]

\[ LTBD = a + b LFG deposit + LINFR + LM_2 + n + e \]

\[ \text{Where:} \]
- \( LTBD \): Total bank deposit
- \( LFG \): Federal government deposit
- \( LINFR \): Inflation (Control Variables)
- \( LM_2 \): Broad Money Supply (Control Variables)

\[ a = \text{Regression equation intercept} \]
\[ b = \text{Regression equation coefficient} \]

Decision Rule

The decision rule is based on a 5% probability value and is stated as follows:

\[ H_0: \theta = \theta_0 \text{ versus } H_1: \theta \neq \theta_0 \]

Reject null hypothesis if \( p\)-value < 0.05
Accept null hypothesis if \( p\)-value > 0.05
Hypothesis Two

H₀: The presence of Treasury Single Account had no significant impact the Capital Adequacy of DMBs in Nigeria.

H₁: The presence of Treasury Single Account had significant impact the Capital Adequacy of DMBs in Nigeria.

The model expressed in the hypothesis is represented as follows:

\[ TCA = a + b \text{FG deposit} + \text{INFR} + M_2 \ldots n + e \]

Relating to econometric form and the variables log linearised, it will appear thus:

\[ LTCA = a + b \text{FG deposit} + \text{LINFR} + \text{LM}_2 \ldots n + e \]

Where;

- **TCA**: Total capital adequacy
- **LTCA**: Total capital adequacy
- **FG deposit**: Federal government deposit
- **LINFR**: Inflation (Control Variables)
- **LM**: Broad Money Supply (Control Variables)
- **a**: Regression equation intercept
- **b**: Regression equation coefficient

Decision Rule

The decision rule is based on a 5% probability value and is stated as follows:

 Reject null hypothesis if p-value < 0.05
 Accept null hypothesis if p-value > 0.05

Hypothesis Three

H₀: The existence of Treasury Single Account had no significant impact on the bank assets quality of DMBs in Nigeria.

H₁: The existence of Treasury Single Account had significant impact on the bank assets quality of DMBs in Nigeria.

The model expressed in the hypothesis is represented as follows:

\[ TAQ = a + b \text{FG deposit} + \text{INFR} + M_2 \ldots n + e \]

Relating to econometric form and the variables log linearised, it will appear thus:

\[ LTAQ = a + b \text{FG deposit} + \text{LINFR} + \text{LM}_2 \ldots n + e \]

Where;

- **LTAQ**: Total asset quality
- **FG deposit**: Federal government deposit
- **LINFR**: Inflation (Control Variables)
- **LM**: Broad Money Supply (Control Variables)

Decision Rule

The decision rule is based on a 5% probability value and is stated as follows:

 Reject null hypothesis if p-value < 0.05
 Accept null hypothesis if p-value > 0.05

Description of Model Variables

**Dependent variables**

- **Capital adequacy**

According to [6], Capital adequacy is the capital expected to maintain balance with the risks exposure of the financial institution such as credit risk, market risk and operational risk, and so on; in order to absorb the potential losses and protect the financial institution’s debt holder. Capital adequacy can be defined in term of capital to deposit ratio because the primary risk is depository risk derived from the sudden and considerably large scale of deposit withdrawals. Another measure of capital is capital to total asset ratio.
Asset quality

Based on [9] the quality of an asset needed to be evaluated to know the ability of the assets to perform or carry out the objectives for which they are acquired is normal to ascertain whether they are in good working condition and this can be done by checking the age as well as ensuring that appropriate provision has been made for depreciation to determine the assets real book value.

Bank deposits

This was measured by taking the natural log of the total banking sector deposits for the period. This in accordance with the work of [5] who argued that in any deposit insurance scheme, the amount of coverage matters. This coverage is determined by total banking deposit, and ultimately affects market discipline by ensuring that depositors are protected.

Independent variable

Federal Government Deposit

These are the financial deposits made by the federal government into the DMBs through the federal government's ministries, departments and agencies (MDAs), and the accounts the money is deposited to is called Treasury sing Account.

Control Variables

Broad Money Supply (M)

Broad Money Supply includes coins and currency, deposits in checking and savings accounts, small time deposits, non-institutional money market accounts. It also includes overnight repos at commercial banks. Repos are a form of short-term borrowing. It is the main measure of the money supply. In fact, it is the economic indicator used to determine an economy’s liquidity. Mathematically stated as; \( M_1 + SD + TD \)

Inflation rates

Inflation rates were adopted as a control variable. The higher the inflation rates in an economy, the higher the operating costs and lower ability of borrowers to repay their loans [3]. Thus, this proxy was adopted to capture the impact of inflation on borrowers’ ability to repay loans.

Techniques of Analysis

The following analytical technique would be applied:
1. Diagnostic Tests
2. Test for Stationarity
3. Regression Analysis

Diagnostic Tests

These tests cover descriptive statistics like skewness, kurtosis, normality, mean, median, variance, standard deviation etc. The mean median and mode would be used to test the aggregative tendencies of the data set while variance, standard deviation, minimum and maximum would test variation of the data. The jarque-bera (JB) test for normality was conducted to confirm normality’s and the skewness of the data. The JB test is a test of whether sample data has the skewness and kurtosis matching a normal distribution. If the data is from normal distribution, the JB statistic asymptotically has a chi-square distribution with two degree of freedom, so the statistic can be used to test the hypothesis that the data are from normal distribution.

Tests for Stationarity

In attempt to estimate the relationship between Asset management corporation of Nigeria and Bank distress management in deposit money banks in Nigeria we tested for unit root using Augmented Dickey Fuller technique. This was necessary in order to ensure that the parameters were stationary at the same order. Thus the study, however seek to prevent occurrence of spurious results. To accomplish this Augmented Dickey - Fuller (ADF) was used to test for test of stationarity
Regression Analysis

Data collected was presented descriptively with aids of table, and also linear regression was used in testing the various hypotheses stated. Regression analysis was concerned with the study of the dependence of one variable (the dependent variable) on one or more other variables (the independent variables) with a view to estimating and predicting the population mean or average value of the latter [8]. Linear regression helped to determine the impact of independent variable(s) on the dependent variable and to what extent. That was to determine both the direction and magnitude of the relationships, ordinary least square was used in testing the three hypotheses formulated.

PRESENTATION AND ANALYSIS OF DATA

<table>
<thead>
<tr>
<th>Year</th>
<th>FG deposit</th>
<th>TCA</th>
<th>TAQ</th>
<th>TBD</th>
<th>INFR</th>
<th>M2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>117.2</td>
<td>591.28</td>
<td>3,393,940</td>
<td>1,661,482.10</td>
<td>15.00</td>
<td>11.76</td>
</tr>
<tr>
<td>2005</td>
<td>119.1</td>
<td>677.87</td>
<td>4,389,327</td>
<td>2,036,089.80</td>
<td>17.86</td>
<td>11.30</td>
</tr>
<tr>
<td>2006</td>
<td>134.1</td>
<td>745.90</td>
<td>6,738,876</td>
<td>3,245,156.50</td>
<td>8.24</td>
<td>11.73</td>
</tr>
<tr>
<td>2007</td>
<td>254.5</td>
<td>800.77</td>
<td>10,469,007</td>
<td>5,001,470.50</td>
<td>5.38</td>
<td>19.29</td>
</tr>
<tr>
<td>2008</td>
<td>292.7</td>
<td>899.72</td>
<td>15,342,548</td>
<td>7,960,166.90</td>
<td>11.58</td>
<td>23.81</td>
</tr>
<tr>
<td>2009</td>
<td>451.8</td>
<td>910.97</td>
<td>10,654,744</td>
<td>9,150,037.70</td>
<td>11.54</td>
<td>25.14</td>
</tr>
<tr>
<td>2010</td>
<td>825.6</td>
<td>995.88</td>
<td>7,706,430</td>
<td>9,784,542.40</td>
<td>13.72</td>
<td>21.36</td>
</tr>
<tr>
<td>2011</td>
<td>678.7</td>
<td>1022.55</td>
<td>7,312,726</td>
<td>11,452,763.30</td>
<td>10.84</td>
<td>22.48</td>
</tr>
<tr>
<td>2012</td>
<td>1113</td>
<td>1705.00</td>
<td>8,150,030</td>
<td>13,132,096.80</td>
<td>12.22</td>
<td>24.93</td>
</tr>
<tr>
<td>2013</td>
<td>2931.60</td>
<td>2415.40</td>
<td>10,042,730</td>
<td>15,768,954.56</td>
<td>8.48</td>
<td>25.45</td>
</tr>
<tr>
<td>2014</td>
<td>764.6</td>
<td>2880.40</td>
<td>12,626,960</td>
<td>17,678,567.23</td>
<td>8.06</td>
<td>22.31</td>
</tr>
<tr>
<td>2015</td>
<td>53.8</td>
<td>3240.00</td>
<td>13,333,000</td>
<td>19,295,375.49</td>
<td>9.01</td>
<td>21.45</td>
</tr>
<tr>
<td>2016</td>
<td>60.4</td>
<td>3150.00</td>
<td>12,991,000</td>
<td>21,346,896.11</td>
<td>15.68</td>
<td>24.72</td>
</tr>
<tr>
<td>2017</td>
<td>90.73</td>
<td>6719.00</td>
<td>15,345,000</td>
<td>23,921,387.21</td>
<td>16.52</td>
<td>22.58</td>
</tr>
<tr>
<td>2018</td>
<td>285.87</td>
<td>9165.00</td>
<td>15,560,000</td>
<td>25,496,450.38</td>
<td>12.09</td>
<td>23.53</td>
</tr>
<tr>
<td>2019</td>
<td>399.00</td>
<td>9247.00</td>
<td>16,104,000</td>
<td>27,873,520.63</td>
<td>15.52</td>
<td>24.77</td>
</tr>
</tbody>
</table>


Where;

FG deposit = Federal government deposit
INFR = Inflation (Control Variables)
TAQ = Total Asset quality
TCA = Total capital adequacy
TBD = Total bank deposit
M2 = Broad Money Supply (Control Variables)

Table 1 contains Treasury Single Account and financial performance of deposit money banks in Nigeria over period of 2004-2019 as collected from the CBN Bulletin and NDIC. The data is a set of annualized time series required for the empirical analyses that would apply the models as specified in chapter three which would answer the research questions and test the hypotheses.

Preliminary Tests

A key preliminary test in this study is the Augmented Dickey-Fuller (ADF) unit root test. The ADF unit root test is very necessary since it would enable ascertain the stationarity of our series and therefore guide us on the appropriate estimation technique to apply. In addition, we conducted the descriptive statistics with the sole aim of understanding the statistical characteristics and trends of our series.
Descriptive Statistics

We conducted descriptive statistics for our set of variables as presented in Tables 1.

Table 2 Descriptive Statistics of the Variables

<table>
<thead>
<tr>
<th>Source</th>
<th>LFG deposit</th>
<th>LTCA</th>
<th>LTBD</th>
<th>LTAQ</th>
<th>LM2</th>
<th>LINFR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>5.680408</td>
<td>7.503418</td>
<td>16.12677</td>
<td>16.09273</td>
<td>3.012256</td>
<td>2.437312</td>
</tr>
<tr>
<td>Median</td>
<td>5.667343</td>
<td>7.185688</td>
<td>16.3216</td>
<td>16.17272</td>
<td>3.114845</td>
<td>2.470829</td>
</tr>
<tr>
<td>Maximum</td>
<td>7.983304</td>
<td>9.132054</td>
<td>17.14319</td>
<td>16.59458</td>
<td>3.236716</td>
<td>2.882564</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>1.128109</td>
<td>0.940578</td>
<td>0.889935</td>
<td>0.461858</td>
<td>0.288163</td>
<td>0.325470</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.234089</td>
<td>0.546935</td>
<td>-0.811866</td>
<td>-0.900440</td>
<td>-1.377587</td>
<td>-0.649337</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>2.280557</td>
<td>1.945285</td>
<td>2.498374</td>
<td>2.956467</td>
<td>3.209575</td>
<td>2.818577</td>
</tr>
<tr>
<td>Jarque-Bera Probability</td>
<td>0.491193</td>
<td>1.539317</td>
<td>1.925424</td>
<td>2.163376</td>
<td>5.089936</td>
<td>1.146313</td>
</tr>
<tr>
<td>Sum</td>
<td>90.88353</td>
<td>120.0547</td>
<td>258.0283</td>
<td>257.4837</td>
<td>48.19609</td>
<td>38.99700</td>
</tr>
<tr>
<td>Observations</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

Source: E-views 9 output, 2021

Descriptive statistics in Table 2 shows that Federal government deposit (LFG deposit) attained a mean of 5.680408 between 2004 and 2019 having a highest level at 7.983304 and lowest at 5.667343. Total capital adequacy (LTCA) stood on a mean of 7.503418 at a maximum of 9.132054 and minimum of 6.382290 over the period. Total Asset quality (LTAQ) attained a mean of 16.09273 having a Maximum of 16.59458 and a Minimum of 15.03750, the mean of Total Bank deposit (LTBD) stood at 16.12677 at a maximum of 17.14319 and minimum of 14.32322 while Inflation Rate (LINFR) attained a mean of 2.437312 between 2004 and 2019 having a highest level at 2.882564 and lowest at 1.682688 Broad Money Supply (LM2) stood on a mean of 3.012256 at a maximum 3.236716 and minimum of 2.424803 over the period.

We observed from the results that our variables, is normally distributed (p > 0.05) and is statistically different from zero. The normality in the variable description are based on the skeweness of the variables and LTCA and LFG deposit were rightly/positively skewed (S>0) while LM2, LTAQ, LTBD and LINFR were negatively skewed (S>0). The results in Tables 4.2 indicate that probability value of the Jarque-Bera (J-B) statistics for Y is greater than 5% conventional level of significance hence, entails that we cannot reject the null hypothesis that our variables are normally distributed. However, if p-value of the J-B statistics of the variable is greater than 5% significant level thereby indicating that the identified series are normally distributed.
Figure 1: Federal government deposit and performance of DMBs in Nigeria
Unit Root Test

It is not econometrically appropriate to carry out a regression analysis on time series data that are not stationary. Such operation is likely to produce a spurious regression results. In order to address the problem, the Augmented Dickey Fuller (ADF) unit root test was employed to determine the stationarity of the data as shown in Table 3.

Table 3 Unit Root Test Results
Summary of Unit Root Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF-Stat</th>
<th>5% critical value</th>
<th>P-value</th>
<th>Inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFG deposit</td>
<td>-2.670122</td>
<td>-1.968430</td>
<td>0.0116</td>
<td>I(1)</td>
</tr>
<tr>
<td>LTCA</td>
<td>-2.241605</td>
<td>-1.968430</td>
<td>0.0288</td>
<td>I(1)</td>
</tr>
<tr>
<td>LTAQ</td>
<td>-3.130376</td>
<td>-1.974028</td>
<td>0.0048</td>
<td>I(1)</td>
</tr>
<tr>
<td>LTBD</td>
<td>-3.312568</td>
<td>-3.144920</td>
<td>0.0380</td>
<td>I(1)</td>
</tr>
<tr>
<td>LIFR</td>
<td>-2.909759</td>
<td>-1.995865</td>
<td>0.0096</td>
<td>I(1)</td>
</tr>
<tr>
<td>LM2</td>
<td>-3.651639</td>
<td>-2.006292</td>
<td>0.00032</td>
<td>I(1)</td>
</tr>
</tbody>
</table>

The result of the unit root test in table 3 reveals the presence of stationarity at 5% critical value. Moreover, all our variables are not integrated of the same order. the variables attained stationarity at I(1), it is apparent that the calculated ADF value is less than critical values for all the variables tested, which confirms that our series has no unit root. Moreover, to confirm the reliability of this result, the p-value of the calculated ADF values for each of the variables is less than 5% level of significance. Given that there is no mixed order of integration, we are guided to use Ordinary least square (OLS) regression analysis in testing for Hypothesis.

Test of Hypothesis One
H₀: The presence of Treasury Single Account had no significant impact on the quality of bank deposits in DMBs in Nigeria.
H₁: The presence of Treasury Single Account had significant impact on the quality of bank deposits in DMBs in Nigeria.
Table 4 OLS regression Model Estimation Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFGD</td>
<td>-0.158763</td>
<td>0.116706</td>
<td>-1.360363</td>
<td>0.1987</td>
</tr>
<tr>
<td>LINFR</td>
<td>0.143574</td>
<td>0.365934</td>
<td>0.392350</td>
<td>0.7017</td>
</tr>
<tr>
<td>LM2</td>
<td>2.975596</td>
<td>0.440845</td>
<td>6.749754</td>
<td>0.0000</td>
</tr>
<tr>
<td>C</td>
<td>7.715414</td>
<td>1.570924</td>
<td>4.911387</td>
<td>0.0004</td>
</tr>
</tbody>
</table>

R-squared 0.801574 Mean dependent var 16.12677
Adjusted R-squared 0.751967 S.D. dependent var 0.889935
S.E. of regression 0.443213 Akaike info criterion 1.422787
Sum squared resid 2.357257 Schwarz criterion 1.615934
Log likelihood -7.382296 Hannan-Quinn criter. 1.432678
F-statistic 16.15863 Durbin-Watson stat 0.930834
Prob(F-statistic) 0.000163

Source: Author’s compilation 2021

Based on table 4 above, the coefficient of the constant is 7.715414. It implies that when the independent variables are held constant, the value of Total bank deposit (LTBD) will be 7.715414. It can be observed that FG deposit has negative but non-significant impact on Nigeria’s LTBD. This was explained by the positive coefficient value (-0.158763) of FG deposit and its corresponding probability value (0.1987), which is greater than 0.05 significant levels. From the model above, R², which is the coefficient of determination, is 0.801574. This entails that 0.80% of LFG deposit was explained by changes in the LTBD. The adjusted R² take account of more number of regressors included in our model. The F-value (16.15863), with a probability 0.000163 < 0.05 is an indicative that the overall regression is significant. The Durbin Watson statistics (DW) approximate value of 0.930834 which is greater than the value of R² (0.801574) shows signs of no serial auto-correlation.

Decision
The coefficient of LFG deposit is negative signed with p-value 0.1987 > 0.05. Thus, we accept the null hypothesis and reject the alternate hypothesis which states that Treasury single account have a significant impact on the quality of bank deposits in DMBs in Nigeria

Test of Hypothesis Two
H₀: The presence of Treasury Single Account had no significant impact the Capital Adequacy of DMBs in Nigeria
H₁: The presence of Treasury Single Account had significant impact the Capital Adequacy of DMBs in Nigeria
Table 5 OLS regression Model Estimation Results

Dependent Variable: LTCA
Method: Least Squares
Date: 05/05/21   Time: 18:33
Sample: 2004 2019
Included observations: 16

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFG deposit</td>
<td>-0.245800</td>
<td>0.205438</td>
<td>-1.196469</td>
<td>0.2546</td>
</tr>
<tr>
<td>LINFR</td>
<td>0.513659</td>
<td>0.644153</td>
<td>0.797417</td>
<td>0.4407</td>
</tr>
<tr>
<td>LM2</td>
<td>2.316230</td>
<td>0.776019</td>
<td>2.984760</td>
<td>0.0114</td>
</tr>
<tr>
<td>C</td>
<td>0.670640</td>
<td>2.765294</td>
<td>0.242520</td>
<td>0.8125</td>
</tr>
</tbody>
</table>

R-squared 0.449574  Mean dependent var 7.503418
Adjusted R-squared 0.311968  S.D. dependent var 0.940578
S.E. of regression 0.780188  Akaike info criterion 2.553753
Sum squared resid 7.304313  Schwarz criterion 2.746901
Log likelihood -16.43003  Hannan-Quinn criter. 2.563644
F-statistic 3.267099  Durbin-Watson stat 0.595823
Prob(F-statistic) 0.059157

Source: Author’s compilation 2021
Based on table 5 above, the coefficient of the constant is 0.670640. It implies that when the independent variables are held constant, the value of the total capital adequacy (LTCA) will be 0.670640. It can be observed that LFG deposit has negative but no significant impact on Nigeria’s LTCA. This was explained by the negative coefficient value (-0.245800) of LFG deposit and its corresponding probability value (0.2546), which is greater than 0.05 significant levels. From the model above, R², which is the coefficient of determination, is 0.449574. This entails that 0.45% LFG deposit of was explained by changes in the LTCA. The adjusted R² take account of more number of regressors included in our model. The F-value (3.267099), with a probability value 0.059157 > 0.05 is an indicative that the overall regression is insignificant. The Durbin Watson statistics (DW) approximate value of 0.595823 which is greater than the R² (0.449574) shows signs of no serial auto-correlation.

Decision

The coefficient of LFG deposit is negative signed with p-value 0.2546 > 0.05. Thus, we accept the null hypothesis and reject

Test of Hypothesis Three

H₀: The existence of Treasury Single Account had no significant impact on the capital adequacy of DMBs in Nigeria
H₁: The existence of Treasury Single Account had significant impact on the bank assets quality of DMBs in Nigeria
Table 6 OLS regression Model Estimation Results

Dependent Variable: LTAQ  
Method: Least Squares  
Date: 05/05/21 Time: 18:58  
Sample: 2004 2019  
Included observations: 16

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LFGD</td>
<td>-0.181452</td>
<td>0.063623</td>
<td>-2.851989</td>
<td>0.0146</td>
</tr>
<tr>
<td>LINFR</td>
<td>-0.278995</td>
<td>0.199490</td>
<td>-1.398541</td>
<td>0.1873</td>
</tr>
<tr>
<td>LM2</td>
<td>1.548500</td>
<td>0.240328</td>
<td>6.443275</td>
<td>0.0000</td>
</tr>
<tr>
<td>C</td>
<td>13.13897</td>
<td>0.856394</td>
<td>15.34221</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

| R-squared | 0.781055 | Mean dependent var | 16.09273 |
| Adjusted R-squared | 0.726319 | S.D. dependent var | 0.461858 |
| S.E. of regression | 0.241619 | Akaike info criterion | 0.209410 |
| Sum squared resid | 0.700558 | Schwarz criterion | 0.402557 |
| Log likelihood | 2.324723 | Hannan-Quinn criter. | 0.219300 |
| F-statistic | 14.26943 | Durbin-Watson stat | 1.355810 |
| Prob(F-statistic) | 0.000291 | |

Source: Author's compilation 2021

Based on table 4.6 above, the coefficient of the constant is 13.13897. It implies that when the independent variables are held constant, the value of the total asset quality (TAQ) will be 13.13897. It can be observed that LFG deposit has negative but significant impact on Nigeria's LTAQ. This was explained by the negative coefficient value (-0.181452) of FG deposit and its corresponding probability value (0.0146), which is less than 0.05 significant levels. From the model above, R², which is the coefficient of determination, is 0.781055. This entails that 0.78% LFG deposit was explained by changes in the LTAQ. The adjusted R² take account of more number of regressors included in our model. The F-value (14.26943), with a probability value 0.000291< 0.05 is an indicative that the overall regression is significant. The Durbin Watson statistics (DW) approximate value of 1.355810 which is greater than the R² shows signs of no serial auto-correlation.

Decision

The coefficient of LFG deposit is positively signed with p-value 0.0146 < 0.05. Thus, we accept the alternate hypothesis and reject the null hypothesis that the existence of Treasury Single Account had no significant impact on the bank assets quality of DMBs in Nigeria.

Discussion of findings

The main objectives of this study was to evaluate the impact of Treasury Single Account on the financial performance of deposit money banks in Nigeria, while the specific objectives are to: determine the impact of Treasury Single Account on quality of bank deposits in DMBs in Nigeria, ascertain the impact of Treasury Single Account on the Capital Adequacy of DMBs in Nigeria, evaluate the Impact of Treasury Single Account on the bank assets quality of DMBs in Nigeria. These
findings were made in line with their hypotheses and discussed according to these objectives.

Objective One: To determine the impact of Treasury Single Account on quality of bank deposits in DMBs in Nigeria.

The results of our estimation revealed that FG deposit has negative but non-significant impact on Nigeria’s LTBD. This was explained by the positive coefficient value (-0.158763) of FG deposit and its corresponding probability value (0.1987), which is greater than 0.05 significant levels.

Objective Two: To ascertain the impact of Treasury Single Account on the Capital Adequacy of DMBs in Nigeria

The results of our analysis showed that LFG deposit has negative but no significant impact on Nigeria’s LTCA. This was explained by the negative coefficient value (-0.245800) of LFG deposit and its corresponding probability value (0.2546), which is greater than 0.05 significant levels.

Objective Three: to evaluate the Impact of Treasury Single Account on the bank assets quality of DMBs in Nigeria.

As regard to the result, that LFG deposit has positive but significant impact on Nigeria’s LTAQ. This was explained by the negative coefficient value (-0.181452) of FG deposit and its corresponding probability value (0.0146), which is less than 0.05 significant levels.

CONCLUSION AND RECOMMENDATIONS

Summary of the Findings

The followings are the findings of this study:

1. Federal government deposit (FG deposits) has negative and non significant impact on total deposits (LTBD) of deposit money banks in Nigeria.
2. Federal government deposit (FG deposit) has negative and non significant impact on Total Capital (TCA) of deposit money banks in Nigeria.
3. Federal government deposit (FG deposit) has negative but significant impact on asset quality (LTAQ) of deposit money banks in Nigeria.

CONCLUSION

Based on the findings, we conclude that there was no significant difference in the quality of bank deposit and capital adequacy of deposit money banks in Nigeria before and after the implementation of TSA, it only made a negative impact on the quality of bank assets.

RECOMMENDATION

We therefore recommend as follows:

1. That managers of deposit money banks should embrace core banking values and practices in their intermediation role to create wealth in the economy.
2. That managers should also be proactive in their decision making, and should maintain good, lasting relationship with their customers for improve performance.

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