

## **EFFECT OF TREASURY SINGLE ACCOUNT ON LIQUIDITY OF QUOTED DEPOSIT MONEY BANKS IN NIGERIA**

**Anyadufu Anthony Onyeka**

anyadufuanthony@gmail.com

08039613226

Anambra State Polytechnic, Mgbakwu

**Udeachu Peter Izuchukwu**

princepeterperosky@gmail.com

08065369200

Anambra State Polytechnic, Mgbakwu

### **ABSTRACT**

*The study presents empirical evidence on the effect of Treasury Single Account on liquidity in the Nigerian banking industry using annual financial report data for the period 2009-2019. The study used proxy variables which include current ratios, liquidity coverage ratio and loan to deposit ratio to ascertain the relationship between liquidity and TSA. Earlier studies on this subject lacked empirical support for the hypothesis that TSA and bank liquidity is related. Ex-post facto study design was employed by the investigator. Nigerian commercial banks that were mentioned made up the target population. Secondary data taken from annual reports of the banks under examination was used in the study. The study compared the impact of TSA before and after adoption, using a time series analysis. The data were examined using descriptive statistics and the Paired Samples t test to compute data from line and bottom line items in financial statements. The analysis showed t value of -1.283 with significance of 0.269 which is more than 0.05; t value of -4.188 with significance of 0.014 which is less than 0.05 and t of -1.926 with significance of 0.126 which is more than 0.05 was gotten for current ratio, Liquidity coverage ratio and loan-deposit ratio. In contrast to most of prior empirical studies and claims, the adoption of the Treasury Single Account policy had a major impact on borrowing culture but no discernible effect on the loan-deposit ratio or current ratio. The report states that in order to ensure the banks' continued existence and growth, TSA reorganises them to diversify into new investment opportunities and enhance their marketing strategies. The report suggests that DMBs should examine their own operations to ensure they are fulfilling the primary duties for which they were granted licences. They should also develop aggressive marketing strategies to find liquid assets and boost their investments, since doing so would help them keep their liquidity.*

**Keywords: Liquidity, Current ratios, Treasury single account**

## **1.0 Introduction**

Since the discovery of oil in Olubiri in 1957, Nigeria has grown steadily to become the sixth largest producer of oil and gas in the world. Chukwu (2015), said that the oil in the country is just a tip of the iceberg in an ocean of gas meaning the country is abundantly blessed with gas. It is however sad that this abundant riches has not been felt by the average Nigerian on the street. Poverty has become the nation's identity. The citizens are poor and there are poor infrastructures like power supply, roads and hospitals.

Punch Newspaper (2017) revealed that crude oil accounts for 92% of the major source of revenue for the running of government activities; this reliance resulted to reckless spending and mismanagement of public funds in governance. Before now, several government agencies in Nigeria were self-sufficient. They could collect money on behalf of the federal government and they had the freedom to expend part of it since they only needed to remit a portion of the declared amount. Unfortunately, high cost of cash management in Nigerian economy which increases every other year has continued to pose several challenges. One of the challenges arising from high-cash usage among others includes operation of multiple accounts. Governments have been operating multiple accounts for revenue collection and spending in contrary to the provision of the Nigerian Constitution which requires that all government revenue generation must be remitted into a single account.

As a result of economic challenges, Central Bank of Nigeria was directed to open a Consolidated Revenue Account where all government revenue, incomes and inflows are collected into one single account maintained by the Central Bank of Nigeria. This is known as Treasury Single Account (TSA). The idea of TSA is backed by the constitution known as the Consolidated Revenue Fund (CRF) which was established by Section 80 of the Constitution of the Federal Republic of Nigeria, 1999. Section 80 (1) specifies that all revenue, except funds collected by the federation or any other act of the assembly, should be paid into public fund account of the federation created for a specified purpose in accordance with this constitution.

In order to reduce the problem of corruption, the federal government under President Goodluck Ebele Jonathan through the office of the Accountant General issued a Treasury circular with Reference number *TRY/A6&B6/2012 on the 4th July, 2012* titled "Guidelines for Implementation of Government Integrated Financial Management Information System(GIFMIS)". This circular resulted in the implementation of the first phase of a single account policy with 217 ministries, departments and agencies as a case study and interestingly, about N500 billion was saved from the reckless spending of the MDAs (Obinna, 2015). Government was motivated with the achievement of this policy

and went on to urge all banks to employ the technological platform that will help to accommodate the TSA policy. It can, however, be said that the federal government at that time did not have the political will to continue the implementation of the policy (Jegade, 2015). On the 19th of March, 2015 the Treasury office issued another circular titled, "Introduction of e-collection of government receipts" with reference number OAGF/CAD/026/V.1/253 which reintroduced the TSA into the financial system of the country after the victory of President Muhammadu Buhari during the last presidential elections.

The Accountant General of the Federation Ahmed Idris said on the 15th of September 2017, that the Federal government saves roughly 11 billion monthly from the successful implementation of TSA. During the implementation phase, it was estimated that the government pulled out roughly 2.67 Trillion from commercial banks. This study aims to assess the effect of Treasury Single Account on the liquidity of quoted deposit money banks in Nigeria.

### **1.1 AIM OF THE STUDY**

This research will provide an insight into how banks have been coping since the implementation of TSA. It would help assess if banks are going through any liquidity squeeze due to the implementation of TSA thereby enabling CBN to know if they can help out distressed banks.

### **1.2 RESEARCH ANALYSIS**

Ho<sub>1</sub>: TSA policy does not significantly affect the working capital of DMBs in Nigeria.

Ho<sub>2</sub>: TSA policy does not significantly affect the cash reserve ratio of DMBs in Nigeria.

Ho<sub>3</sub>: TSA policy does not significantly affect the loan deposit ratio of DMBs in Nigeria.

## **2.0 REVIEW OF RELATED LITERATURE**

A Treasury Single Account (TSA) is a unified structure of government bank accounts that aims to consolidate and optimize the use of government cash resources (Onyekpere, 2015). It is an ensemble of subsidiary accounts that are all connected to a primary account. Transactions take place in the corresponding subsidiary accounts but at the end of every business day, the closing balances of those component accounts are sent to the principal account (Chukwu, 2015). Andornimye (2017) explained Treasury Single Account (TSA) as one of the financial policies implemented by the federal government of Nigeria to consolidate all the revenues from all the ministries, departments and agencies (MDAs) in the country by way of deposit into commercial banks traceable into a single account at the Central Bank of the country. Treasury Single Account, as described by Adeolu (2015), is a governmental system of accounting in which all government income, receipts, and revenue are gathered into one account that is typically kept up to date by the nation's central bank. All payments are also made through this

account. The government performs all of its payments and receipts through the TSA, which is a bank account or a network of connected bank accounts that provides a comprehensive picture of the government's cash position at all times. TSA is a consolidated picture of government financial resources provided by a single structure of government bank accounts, according to IMF (2010). In accordance with this idea and the unity of treasury, a TSA is a bank account or a group of connected accounts that the government uses to conduct all of its receipts and payments.

Treasury Single Account was introduced as a result of numerous corrupt practices that exist in the Country's public accounting system, lack of transparency and accountability (Kanu, 2016). Before its implementation, revenue-generating MDAs had different accounts in commercial banks which they used to fund their operations. The surplus funds were remitted to the federation account. The funds were usually remitted arbitrarily and therefore made some ministries richer than a government. The result of this situation included leakages of funds, embezzlement of public funds and the inability of a government to know the exact amount in its account. Budgets were therefore prepared using false projection leading to poor implementation. The government ended up borrowing money from banks when it required high-interest funds, while the banks that relied on deposits from ministries (public money) benefited the most from this arrangement. Above all, banks no longer cared to mobilize money from other sectors of the economy. The balances of account of the government with the banks lay idle in the banks. All these stunted the growth of the economy. The aforementioned context led to the President's insistence that the Treasury Single Account Approach be implemented by all departments and ministries.

The important role banks play through liquidity creation impacts on the larger economy by spurring growth in the real sector (Obiageri, 2013). This is not surprising as the backbone of each country's economy is its banking industry. Any country's economic standing is based on the stability of its banking sector. Put differently, any problem affecting banks likewise impacts the country's economy (Kanu, 2016). This pivotal position they occupy makes them a cynosure of economic-related policies especially monetary-based.

Banks create liquidity on the balance sheet by financing less liquid assets with funds from relatively liquid liabilities. Liquidity in the banking system is vital to the sustainability of the financial system. Evidence could be drawn from the global financial market crises between 2007 and 2009. Tensions appeared in global markets and even in Nigeria, as liquidity in money markets declined significantly, following credit rationing in the interbank markets. The tightening of liquidity in the market and increasing default risk, culminated in the intervention of central banks in the financial system. In Nigeria, the Central Bank, injected over N620 billion or approximately \$4.1 billion, representing

2.5 per cent of Nigeria's entire 2010 GDP into the banking system to improve the banks' liquidity and keep them from failing. Between 2008 and 2009, Nigerian banks wrote off loans equivalent to 66% of their total capital. A majority of these write offs occurred in the eight banks, which received intervention from the CBN. The write offs occurred because most of the assets created were relatively illiquid and had diminished in value (Obiageri, 2013).

Managing liquidity in the banking sector involves monitoring and projecting cash flows needs of banks, to ensure that adequate liquidity is maintained. It involves maintaining a balance between short-term assets and short-term liabilities. Liquidity is particularly important to banks due to their high leveraged positions, to compensate for expected and unexpected fluctuations in the balance sheet. It measures cash availability and the pace at which current assets are turned into cash to satisfy both regular and extraordinary requests (Nwaezeaku, 2006). The capacity of the bank to keep enough money on hand to cover its maturing commitments is known as bank liquidity. The term liquidity means the ability of an organization to realize value in the post liquid money among all assets. It entails converting assets into cash during regular company activities, maintaining a steady flow of cash to pay off current liabilities as they become due, and guaranteeing that there is enough money available for regular business operations (Halimeshi, 2014). Liquidity describes a bank's ability to fund asset increases and meet financial obligations, without incurring damaging losses. According to Andornimye (2017), it is the bank's capacity to promptly satisfy demands for cash, checks, other withdrawals, and legal new loans while adhering to reserve standards.

### **2.1 Categories of Liquidity**

**Central bank liquidity:** Central Bank liquidity constitutes deposits of financial institutions held at the central bank. These deposits are required by the central bank and are often known as reserve balances. Reserves are held by banks to meet the prudential guidelines or statutory requirements.

**Market liquidity:** This liquidity involves buying and selling of assets without unduly affecting the assets' price. An asset's market liquidity is the ease at which an asset can be sold quickly without incurring unacceptable losses.

**Funding liquidity:** Funding liquidity describes the ability to raise cash or its equivalent, quickly either through collateralised loans, asset sales or by borrowing. A bank, is therefore, liquid if it is able to meet funding needs as at when the demand arises and if at all times outflow of funds from the bank are less than or equal to inflows into the bank. Short of this, there will be a liquidity mismatch, which can lead to a crises or a run on the bank.

Liquidity risk arises due to mismatch between assets which are generally long term in nature and liabilities such as deposits and borrowings which usually are of short term. The maturity profile of the assets and liabilities of banks gives an indication of the magnitude of liquidity risks in a banking institution. Regulatory requirements such as minimum cash or liquid assets ratio are imposed to ensure that banks are all the time capable of meeting the average cash withdrawals at short notice.

## **2.2 Sources of Banking System Liquidity**

There are different ways and methods banks source for and maintain liquidity. However, they are broadly divided into two which are liability management sources and assets management sources (Obiageri, 2013).

### **2.2.1 Liability Management Sources**

Liability management sources arise when a bank's source of funding liquidity is predominantly from borrowing. In such instances, the bank does not generate sufficient funds from customer deposits and as such, borrows funds from other financial institutions or government. To remain liquid, the funds borrowed, are often continually rolled over. The interest rates paid by the bank can rise rapidly if the credit worthiness of the bank diminishes. This source of liquidity for banks is riskier than asset management sources and can lead to bank failure, if a run on ensue in the bank. The use of liabilities as a source of liquidity is greatly affected by how sensitive the institution is to credit risk as well as its sensitivity to interest rate volatilities.

### **2.2.2 Asset Management Sources**

The main source of liquidity for a deposit money bank is customer deposits though bank reserves and loans are its primary assets. Banks also invest in fixed income securities such as treasury bills which are easily converted to cash and as such serve as a source of liquidity to the bank. The holding of such assets that can easily be converted into cash, is referred to as asset management banking.

## **2.3 Measures of Liquidity**

The key ratios used to measure liquidity are the current ratio and the quick ratio. Current ratio is calculated by dividing the total current assets by total current liabilities whereas the quick ratio is computed by deducting inventories from current assets and dividing the result by current liabilities. The higher the current ratio and the quick ratio, the better the financial position of the business. However, critics have argued that a very high current ratio might be an indicator that a company is sitting around with a lot of cash, as it lacks the managerial acumen to put those resources to work. The most common financial ratios that reflect the liquidity position of a bank are customer deposit to total asset and total loan to customer deposits (Ongore& Kusa, 2013). Another is cash to deposit ratio (Ongore& Kusa, 2013).

### **The Liquidity Coverage Ratio (LCR)**

To determine LCR, the shorter-term measure, the bank is to compare its highly liquid assets (HLAs) to its total net cash outflow (TNCO) over 30 calendar days. The TNCO represents all expected cash flows from the bank's outstanding balances (liabilities or off balance sheet commitments) that mature within 30 days multiplied by expected runoff/drawdown rates.

### **Funding-Liquidity Ratio**

This is measured by the loan/deposit ratio. It helps assess a bank's liquidity, and by extension, the aggressiveness of the bank's management. A rise in the ratio means a less liquid position and thus the bank(s) would be less inclined to lend and vice-versa. If the loan/deposit ratio is too high, the bank could be vulnerable to any sudden adverse changes in its deposit base. Conversely, if the loan/deposit ratio is too low, the bank is holding on to unproductive capital and earning less than it should. Ibe (2013) and Fungáčová and Poghosyan (2011) used this as a measure of liquidity.

### **Cash Ratio**

Another measure of liquidity is the cash ratio which is the ratio of cash to total deposit or assets. Since the CBN has the cash ratio, it is especially useful for sterilising surplus liquidity in the banking system and is simple to monitor on a daily basis. Rather than loans and advances, which make up the most liquid assets or "hard" of bank assets, this ratio directly links liquid assets to deposits. The cash ratio has a drawback in that substantial part of the liquidity assets is not readily available to meet liquidity needs. Ibe (2013) used this as a measure of liquidity.

## **2.4 Theoretical Review**

The study was anchored on the incremental theory of public policy making. This theory was found to be appropriate because it underlies the sufficing decisions (policies) of government rather than maximising ones in circumstances of scarce resources which plague the real world.

### **Incremental Theory of Public Policy Making**

American political scientist Charles E. Lindblom coined the term incrementalism for the first time in the 1950s in reaction to the then-dominant belief that formulating public policy involved logical analysis and a choice that maximised values. The theory of incrementalism highlights the diversity of stakeholders engaged in the policy-making process and forecasts that decision-makers will build upon previous decisions by prioritising little adjustments over major ones. Public budgeting, foreign policy, and domestic policy have all been successfully explained by incrementalism.

Lindblom regarded rational decision making as an unattainable ideal. To function properly, rational-comprehensive decision making must satisfy two conditions that are unlikely to be met for most issues: agreement on objectives and a knowledge base sufficient to permit accurate prediction of consequences associated with available alternatives. Where these conditions are unmet (and they will be unmet, according to Lindblom, for most policy issues), the rational method provides no guidance whatsoever for policy makers. Incrementalism circumvents these problems, producing defensible policies where the rational method is paralyzed.

The incremental theory rests on four assumptions as opined by Vahyala et al (2016) which are:

- Only small steps are taken at a time in order to achieve specific objectives.
- It is non-comprehensive because of the limitation imposed on policymakers by scarce resources to go into sufficient detail of problems before taking remedial actions.
- Policy decision involves “successive comparisons because policy is never made once.
- Decision making in reality “suffices rather than maximizes from among the available options.
- It entails plurality in choice.

### **3.0 METHODOLOGY**

#### **3.1 Research Design**

The *ex post facto* research design was employed in this study. This research design was adopted because it is concerned with the current or past status of something, tells about behaviour of a group of subjects and does not involve manipulation of variables. In this study, the liquidity of commercial banks in different periods is studied to investigate the impact of treasury single account by observing and investigating differences between ratios before and after its implementation. The content analysis method was also used as it enables the study on information from published materials in this case are audited financial statements.

#### **3.2 Population of the Study**

The population of this study comprised the entire population of all the fourteen public listed Commercial Banks in Nigeria. Since the number of Commercial Banks is not large, all the banks in the population formed the sample. Thus, this was a census study of all the Commercial Banks in Nigeria. These banks include: First Bank Holdings PLC, Union Bank PLC, Access Bank PLC, Zenith Bank PLC, Guaranty Trust Bank PLC, Wema Bank PLC, Skye Bank PLC, Sterling Bank PLC, Stanbic IBTC Bank PLC, First City Monument Bank PLC, Fidelity Bank PLC, Unity Bank PLC, Eco Bank PLC and United Bank for Africa PLC (NSE Website, 2019).



### **3.3 Method of Data Collection**

The study employed secondary data. To ensure that the study elements are complete and consistent, the researcher collected data for the commercial banks that were in operation from 2010 to 2019. TSA was implemented in 2015 which leaves five financial years after its implementation for study. A five (5) year period was considered adequate to provide the data for the period before TSA implementation and this in line with past similar studies like Mwangi (2014). Liquidity data was extracted directly from annual reports deduced by calculating relevant items extracted from different sections of the audited financial statements (AFS).

### **3.4 Method of Data Analysis**

The liquidity of Banks was measured using current ratio, liquidity coverage ratio and loan to deposit ratio. Annual reports of sampled banks for 2015 till 2019 financial years represented data sources for post- TSA implementation period while those from 2009 to 2014 were for pre-TSA implementation period.

Averages of each of the ratios calculated for each bank in each of the two periods (pre and post) were analysed and statistical difference sought using inferential statistics. Descriptive statistics (mean, standard deviation, minimum and maximum values) were used to analyze the data first.

### **3.5 Decision Rule**

The decision rule is, if the calculated value is less than the significant value of 0.05, the null hypothesis would be accepted; otherwise the alternative hypothesis would be rejected.

## **4.0 DATA PRESENTATION AND ANALYSIS**

This study provided two types of data analysis: descriptive analysis and inferential analysis. The descriptive analysis helped the study to provide detailed information about each relevant variable.

## 4.2 Data Analysis

**Table 1: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
Loan-Deposit Ratio before TSA	5	.3797	.7420	.526968	.1567820
Loan-Deposit Ratio with TSA	5	.6000	.7975	.703736	.0857056
Liquidity Ratio before TSA	5	.3043	.6321	.447348	.1244313
Liquidity Ratio with TSA	5	.4120	.6095	.502634	.0888781
Cash Reserve Ratio before TSA	5	1.0000	20.0000	10.600000	6.9137544
Cash Reserve Ratio with TSA	5	20.0000	22.5000	22.000000	1.1180340
Valid N (listwise)	5				

*Source: SPSS 23*

Table 1 shows the descriptive statistics analysis of each ratio examined for both pre-TSA implementation period and TSA implementation period. Using mean figures, all ratios were found to increase after TSA was implemented. The average value of capital adequacy ratio both before and after TSA implementation is above 10% and 15% which are minimum thresholds set by CBN.

**Table 2: Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Loan Deposit ratio before TSA	.393	5	.014	.778	5	.049
Loan Deposit ratio with TSA	.319	5	.010*	.623	5	.022
Liquidity ratio before TSA	.587	5	.034*	.472	5	.000
Liquidity ratio with TSA	.413	5	.010*	.597	5	.005
Cash Reserve ratio before TSA	.420	5	.011*	.766	5	.042
Cash Reserve ratio before TSA	.473	5	.001	.552	5	.000

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

*Source: SPSS 23*

The Kolmogorov-Smirnov and Shapiro-Wilk tests revealed the normality of the distributions. Six variables were found to be normal with significance levels less than

0.05. Current ratio before TSA and Loan-Deposit ratio with TSA were not failed the normal distribution test.

1.

**Ho: TSA has no significant impact on working capital management of DMBs in Nigeria.**

**HA: TSA has a significant impact on working capital management of DMBs in Nigeria.**

**Table 3: Average Current Ratios before and after TSA Implementation**

	Current Ratio before TSA		Current Ratio with TSA
2010	0.3042	2015	0.4234
2011	0.42	2016	0.412
2012	0.4971	2017	0.491
2013	0.6320	2018	0.6095
2014	0.3832	2019	0.5772

*Source: Agosto Reports 2020*

**Table 4 Paired Samples Test for liquidity ratios before and with TSA**

	Paired Differences					
	Mean	Std. Deviation	Std. Error Mean	t	Df	Sig
Pair 1 Liquidity ratio before TSA - Liquidity ratio with TSA	-.0552860	.0963822	.0431034	-1.283	4	.269

*Source: SPSS 23*

A negative t value was derived of -1.283. The negative value depicts that liquidity ratio before TSA was less than current ratio with TSA for commercial banks. The level to which current assets can finance maturing obligations increased despite the withdrawal of government funds from commercial banks. This is evident in the previous table with greater ratios before TSA than after TSA. This was however not found to be to a significant level ( $p=.269>.05$ ).

**Decision Rule:** Accept null hypothesis if p value denoted by 'sig' value of t is higher than 0.05 ( $p>0.05$ ) and reject null hypothesis and accept alternate hypothesis if p value denoted by 'sig' value of t is less than 0.05 ( $p <0.05$ ).

From the Paired samples table, t value is -1.283 with significance of 0.269 which is more than 0.05. The null hypothesis is accepted. TSA has no significant impact on working capital management of DMBs in Nigeria.

**II:**

**Ho: Quoted DMBs’ cash reserve ratio ratios are not affected significantly by the implementation of TSA.**

**HA: Quoted DMBs’ cash reserve ratios are affected significantly by the implementation of TSA.**

**Table 5: Average Cash Reserve Ratios before and after TSA Implementation**

	Cash Reserve Ratio before TSA		Cash Reserve Ratio with TSA
2010	1.0	2015	20.0
2011	8.0	2016	22.5
2012	12.0	2017	22.5
2013	12.0	2018	22.5
2014	20.0	2019	22.5

*Source: Agosto Reports 2020*

**Table 6 Paired Samples Test II**

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Cash Reserve ratio before TSA - Cash Reserve ratio before TSA	-11.400	6.08687	2.72213	-18.9578	3.84213	-4.188	4	.014

*Source: SPSS 23*

A negative t value was derived of -4.188. The negative value depicts that cash reserve ratio for commercial banks before TSA was less than the ratios with TSA. Banks had to increase percentage of cash to be available at every point in time since government funds

become zero balances at close of business. The rise was also found to be to a significant level ( $p=.014>.05$ ).

**Decision Rule:** Accept null hypothesis if p value denoted by ‘sig’ value of t is higher than 0.05 ( $p>0.05$ ) and reject null hypothesis and accept alternate hypothesis if p value denoted by ‘sig’ value of t is less than 0.05 ( $p <0.05$ ).

From the Paired samples table, t value is -4.188 with significance of 0.014 which is less than 0.05. The null hypothesis is accepted. Quoted DMBs’ cash reserve ratios are affected significantly by the implementation of TSA.

**III:**

**Ho: TSA Implementation has no significant impact on the Loan-Deposit Ratio of DMBs in Nigeria.**

**HA: TSA Implementation has a significant impact on Loan-Deposit Ratio of DMBs in Nigeria.**

**Table 7: Average Loan to Deposit Ratios before and after TSA Implementation**

	Loan to Deposit Ratio before TSA		Loan to Deposit Ratio with TSA
2010	0.742	2015	0.69578
2011	0.4477	2016	0.7975
2012	0.42313	2017	0.782
2013	0.37965	2018	0.6434
2014	0.64236	2019	0.6

Source: *Agusto Reports 2020*

**Table 8 Paired Samples Test IV**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Loan Deposit ratio before TSA - Loan Deposit ratio with TSA	-.17676	.2051876	.091762	-.4315421	.0780061	-1.926	4	.126

Source: *SPSS 23*

A negative t value was derived of -1.926. A glance at table 4.8 shows that loan to deposit ratio before TSA was less than the ratio with TSA for commercial banks. The level to which current assets can finance maturing obligations increased despite the withdrawal of government funds from commercial banks. The difference was found to be significant ( $p=0.126 > 0.05$ ). There was no significant increase in Loan-Deposit ratio after the introduction of TSA.

**Decision Rule:** Accept null hypothesis if p value denoted by ‘sig’ value of t is higher than 0.05 ( $p > 0.05$ ) and reject null hypothesis and accept alternate hypothesis if p value denoted by ‘sig’ value of t is less than 0.05 ( $p < 0.05$ ).

From the Paired samples table, t is -1.926 with significance of 0.126 which is greater than 0.05. The null hypothesis is accepted. TSA Implementation has no significant impact on Loan-Deposit Ratio of DMBs in Nigeria.

#### **4.3 Discussion of Findings**

Averagely, all banks had loan-deposit ratios less than 1. This implies that banks relied on their own deposits to make loans to customers, without any outside borrowing even after the introduction of TSA. Though loan-deposit ratios increased after TSA, no significant difference existed between ratio values of both periods. Increased ratio depicts more payment of interest to banks. TSA spells out lower deposits in commercial banks according to apriori assumption. However, we found increased deposits in banks even for 2015 and 2016 years. The increase in L/D ratio is thus attributable by a more than proportionate increase in loans compared with deposits.

Furthermore, there was no significant difference found in liquidity ratio. Current assets covered current liabilities in both periods. This implies that TSA did not affect liquidity management. Banks have been able to close up vacuum created by TSA by strategic marketing activities to secure and attract deposits from private individuals, business organizations, charity organization, religious organizations and proceeds from other short term investments.

Cash Reserve Ratio was found to differ significantly after TSA implementation. The movement of funds from accounts in commercial banks raised the need to increase cash reserves of banks to ensure optimal liquidity. In the same light, credit ratio before the implementation of TSA measured by percentage of non-performing loans to total loans was found to be statistically different from credit ratio in times of TSA implementation. NPL ratio increased significantly after TSA implementation and this can be attributed to the enforcement of more loans by CBN through sanctions. Ndubuaku et al (2017) also found that TSA had a significant impact on Credit to the Private Sector, Deposit Mobilization and Loans and Advances. Andornimye (2017) found no significant impact

on credit creation by banks to the public but found a negative significant impact on current ratio of banks, positive significant impact on deposit mobilization by banks.

## **5. CONCLUSION**

### **5.1 Summary of Findings**

This section of the study provides a summary of major findings during the course of the research.

1. TSA has no significant effect on working capital management of DMBs in Nigeria.
2. Quoted DMBs' cash reserve ratios are affected significantly by the implementation of TSA.
3. TSA Implementation has no significant effect on Loan-Deposit Ratio of DMBs in Nigeria.

In the light of the objective to investigate the effect of treasury single account on the liquidity of commercial banks in Nigeria, the paired samples t test was applied to compute data from line and bottom line items in financial statements. In particular, the study focused on current ratio, Cash reserve ratio and loan-deposit ratio as the bank's liquidity and risk performance characteristics. Cash reserve ratio was found to significantly increase with TSA implementation Findings revealed that other ratios were not affected. The study concludes that TSA has re-aligned the banks to diversify into other areas of investment and improve marketing for continuous survival and growth.

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