Investigating the Effectiveness of TSA in Blocking Public Funds Leakages in Nigeria

Olorunnishola, Florence Yemisi & Fasina, Hassan Taiwo

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v8-i4/4064  DOI:10.6007/IJARBSS/v8-i4/4064

Received: 10 April 2018, Revised: 29 April 2018, Accepted: 05 May 2018

Published Online: 10 May 2018

In-Text Citation: (Olorunnishola & Fasina, 2018)
To Cite this Article: Olorunnishola, F. Y., & Fasina, H. T. (2018). Investigating the Effectiveness of TSA in Blocking Public Funds Leakages in Nigeria. International Journal of Academic Research in Business and Social Sciences, 8(4), 817–831.

Copyright: © 2018 The Author(s)
Published by Human Resource Management Academic Research Society (www.hrmars.com)
This article is published under the Creative Commons Attribution (CC BY 4.0) license. Anyone may reproduce, distribute, translate and create derivative works of this article (for both commercial and non-commercial purposes), subject to full attribution to the original publication and authors. The full terms of this license may be seen at: http://creativecommons.org/licenses/by/4.0/legalcode

Vol. 8, No. 4, April 2018, Pg. 817 - 831
http://hrmars.com/index.php/pages/detail/IJARBSS  JOURNAL HOMEPAGE

Full Terms & Conditions of access and use can be found at
http://hrmars.com/index.php/pages/detail/publication-ethics
Investigating the Effectiveness of TSA in Blocking Public Funds Leakages in Nigeria

1Olorunnishola, Florence Yemisi, 2Fasina, Hassan Taiwo
1Department of Accounting and Finance, Faculty of Management Sciences, Joseph Ayo Babalola University Ikeji, Arakeji, Osun State, Nigeria, 2Department of Management and Accounting, Faculty of Management Sciences, Ladoke Akintola University of Technology, Ogbomoso, Oyo State, Nigeria.
Email: florenceorunnishola@gmail.com, htfasina@lautech.edu.ng

Abstract
This study determined the extent to which TSA can block financial leakages in public funds management. The study adopted judgemental method of sampling to select forty workers from a total population of one hundred and fifty eight staff of the Federal Polytechnic, Federal Pay Office, Corporate Affairs Commission and Nigeria Security and Civil Defence Corps Ado Ekiti, Ekiti State Nigeria. Descriptive statistics of percentages, average and standard deviation were used to analyze the respondents’ opinions to the questionnaire. Reactions were allocated weights of 0 to 4 on Likert scale according to the degree of disagreement / agreement with each statement. An overall average mean score of 2.60 indicate that respondents agree that TSA block financial leakages in public fund management. Regression analysis result confirmed that TSA is significant in financial leakage blockages (t value =28.04, p = 0.00), thus indicating the effectiveness of TSA policy operations in blocking financial leakages in public funds management in Nigeria. It was recommended that central bank should improve on the statements of accounts dispatch to real time gross settlement systems and automated clearing house (ACH) to avail them of all transactions details using automated processes on a daily basis. Government should improve on central bank oversight functions on payment and settlement by using automated processes and promote education and training of staff on TSA operations to avert sabotage of the policy.

Keywords: Treasury Single Account, RTGS, Automated Clearing House, Financial Leakage Blockage, Public Fund.

Introduction
Some of the issues that have pervaded the public discourse centre on good governance and prudent utilisation of the country’s resources and the need for tax payers to get value for contributing their own part of the governance social contract (Eme, Chukwurah and Ihenacho,
Nigeria as a country is reputed for unabated wastefulness in managing its resources, considering the international oil market uncertainties, the menace of macroeconomic instability in many developed economies, pervading poverty, unbridled insecurity, increasing youth unemployment level, grossly inadequate infrastructures that ordinarily should have driven growth in the economy, the need for Nigeria to ensure judicious utilisation of tax revenue for accelerated development cannot be over-emphasised (Eme, Chukwurah and Ihenacho, 2015). Unfortunately, many years of consistent advocacy for accountability and transparency in the application of earned incomes from taxation by Civil Society Organisations (CSOs), fiscal policy experts, and other stakeholders have not translated to significant gains as the required commitment of political leaders and their civil servant collaborators at all level of governance to plug leakages in the management of public funds is still missing (Eme, Chukwurah and Ihenacho, 2015). This is despite the steps the government has taken in broadening the scope of the country’s sources of tax revenues by introducing tax reform measures, particularly policy and regulatory guidelines, including the streamlining of the hitherto complex and multi-layered system, being adopted by federal and state governments.

In fact, of recent the rate of unemployment as published by the Nigerian Bureau of Statistics (NBS), showed that over 7 million Nigerians became unemployed since President Muhammad Buhari assumed power two years ago. NBS in its report, had said the number of Nigerians that became unemployed rose under the Buhari regime from 8,036 million in 2015 fourth quarter to 15,998 million in third quarter of 2017 (Daily Post, 2017). This is an indication that more work has to be done in plugging financial leakages so that more employment opportunities can be created for Nigerians.

The Guardian Editorial (2015), reports that President of Nigeria, Muhammad Buhari by the fourth quarter of 2015 directed all federal Ministries, Departments and Agencies (MDAs) to start remitting all government revenues, incomes and other receipts into a unified pool of single account with the Central Bank of Nigeria (CBN) and this is seen as a bold and highly commendable move directed at one of the strongholds of corruption in public institutions. Apparently, a master stroke against an unholy alliance between MDAs and banks (The Guardian Editorial, 2015). The implementation of the Treasury Single Account (TSA), is burdened with high expectations of better economic potentials owing to its possibility of ensuring transparency and accountability. According to Jonah Otunla, the former Accountant-General of the Federation, prior to TSA, Nigeria had multiple banking arrangements for revenue and payment transactions. He stated that, “There were more than 10,000 bank accounts in multiple banks, which made it impossible to establish government consolidated cash position at any point in time (Eme, Chukwurah and Ihenacho, 2015). It led to pockets of idle cash balances held in MDAs’ accounts when the same MDAs were out borrowing from commercial banks” (Opeyemi, Samuel, Faboyede and Peter, 2017).

The TSA is a type of government bank accounts that enables consolidation and optimal utilisation of government cash resources (Ndubuaku, Ohaegbu and Nina, 2017). Government can transact all its receipts and payments and gets a consolidated view of its cash position at any given time through this bank account or set of linked bank accounts (Yusuf, 2016).

This study is aimed at establishing that TSA, if properly implemented, would have a significant effect on the public fund management in Nigeria. Hence this study is focused on determining the extent to which TSA can block financial leakages in public funds management.
Literature Review

Conceptual Review

Conceptualizing Financial Leakages
It is no longer a gainsay that Nigeria, though an oil and gas producing nation is deeply immersed in ‘resource curse’ phenomenon which has led to an increased awareness and advocacy towards transparency in the management of revenue from natural resources (Eme, Chukwurah and Ihenacho, 2015). This emanated from the fact that despite the huge income from oil and gas activities, its citizens do not get commensurate benefits accruing from such enormous resources (Eme, Chukwurah and Ihenacho, 2015). Aderinokun (2010), also established that: “Lack of transparency is seen as a major hindrance to the creation of a favorable investment climate, better management of public resources and poverty reduction”. According to Ugulor (2009), “Efficient, transparent governments, closely watched by citizens with access to accurate, timely information on state spending can help restore trust in public institutions and strengthen democracy”. Transparency helps to guard against any possible misuse of power by ensuring that information available can be used to measure the authorities' performance (Eme, Chukwurah and Ihenacho, 2015). Transparency therefore, seeks to achieve accountability. Since transparency enhances trust, therefore, adequate transparency is crucial to ensuring that wealth is managed for the benefit of the whole population (Nicholas, 2009). Lack of financial leakage blockages in some nations can aggravate poor governance which could lead to corruption, conflict and increasing inequality. Hence the question that, does an abundance of natural resources more often becomes a “curse” than a “blessing” for developing nations? (Katsouris, 2009). Strengthening transparency and accountability in the public fund management in Nigeria provides an opportunity to reduce revenue leakage and stemming of corruption (Eme, Chukwurah and Ihenacho, 2015). This reduces the tendencies for the abuse of power and diversion of revenues which distort policy and politics in Nigeria and undermine the potential for public fund to be used to accelerate economic and social development (Müller, 2010). Globally, it is a consensus view that greater transparency is needed in natural resource rich states to entrench accountability, curb corruption and strengthen good governance (Okonji, 2009). Financial leakage blockages includes open budget preparation, clarity of roles and responsibilities; public availability of information, execution report and independent assurances on integrity (Eme, Chukwurah and Ihenacho, 2015). Transparency in revenue has the potentials to combating corruption and fraud, improve productivity and output and also increase accountability in the public fund management (Olanipekun, Brimah and Olowoleni, 2015).

Conceptualizing Treasury Single Account (TSA)
According to Oyedele (2015), Treasury Single Account is a bank account or a set of linked accounts through which the government transacts all its receipts and payments and gives a consolidated view of government cash resources. The principle of unity ensues from the fusion of all cash irrespective of its end use. In addition, it is important to distinguish individual cash transactions for control and reporting purposes, this purpose is achieved through the accounting system and not by holding or depositing cash in transaction specific bank accounts (Opeyemi, Samuel, Faboyede and Peter, 2017). This enables the treasury at a transaction level to delink management of cash from control (Sailendra and Israel, 2010). In a country like Nigeria where
effective control over cash resources is being lacked, the government has paid for institutional deficiencies in multiple ways over the years such as follows:

a) Idle cash balances in bank accounts frequently failed to garner market-related remuneration (Agbe, Terzungwe and Igbabee, 2017).

b) The government incurs unnecessary borrowing cost on raising funds to cover a perceived cash shortage by being unaware of its resources (Agbe, Terzungwe and Igbabee, 2017).

c) Idle government cash balances in the commercial banking sector are not idle for the banks themselves, and can be used to extend credit (Sailendra and Israel, 2010). Depleting this extra liquidity through open market operations also imposes costs on the central bank (Project Writers, 2016). This research work is hereby carried out to determine whether the operations of Treasury Single Account will solve the problem of financial leakages in public fund management (Nwankwo, 2017).

Usually all government revenue, receipts and income are collected and deposited into a Treasury Single Account, maintained by the country’s Central Bank and all payments done through this account as well (Zayol, Iorlaha and Nege, 2017). The purpose is primarily to block public fund leakages and avoid misapplication of the fund as well (Fatile and Adejuwon, 2017). The operations of a Treasury Single Account helps to ensure proper cash management by eliminating idle funds usually left with different commercial banks and enhance reconciliation of revenue collection and payments (Adeolu, 2015).

The main thrust of TSA implementation is to maximize the use of public fund through concentration and reduction in float costs (Cem, 2014). The TSA solutions are designed to capture detailed information about the government’s cash resources and spending on a daily basis. However, capturing timely information on cash balances and flows is not enough if balances are not immediately available to the Treasury (because of lack of formal authority, or due to lengthy accounting and transfers/payment processes). Also, the ability to forecast cash inflows and outflows and resultant balances on the TSA is essential in improving cash management (Cem, 2014). It should be noted that through properly designed TSA interface on most of these key aspects, the Financial Management Information System (FMIS) platforms can provide reliable information (Cem, 2014).

TSA Implementation depends on a country’s specific conditions such as regulations, banking system, electronic payment system (EPS) arrangements, etc. Many countries preferred “centralized TSA operation” because it allows them to monitor the daily collections, prompt spending and for cost effectiveness (Ali and Allister, 2004). In order, to achieve this, a mutually agreed TSA Protocol (between the Central Treasury, (CT) and the Central Bank, (CB)) that will enable a reliable TSA infrastructure to be established before the implementation of FMIS solutions (it is usually more difficult and costly to introduce TSA after the development of FMIS) must be put in place (Biagio and Massimo, 2001). Secure linkages between the banking system, and the EPS operations for the exchange of data daily is important to ensure timely and reliable reporting on all government revenues and expenditures. Coverage of the Central Bank’s branch network is also a key consideration (Cem, 2014).

In centralized TSA model, beyond just being the custodian of the TSA accounts and bulk transfers of funds, the Central Bank is expected to provide a number of payment services (disbursements to beneficiaries via Real Time Gross Settlement system (RTGS) and/or Automated Clearing House solution (ACH); real-time access to account statements) (Cem, 2013). Central Bank may be willing
to disburse high-value, low-frequency payments via RTGS in some cases, but unwilling to process ACH files (e.g. for payroll) or to print cheques. Therefore, the TSA model may likely involve commercial bank distribution accounts for lower-value payments (BIS-CPSS, 2005). The Central Bank may also perform a ‘quasi’ cash management role on behalf of the government in some countries, and provide a short-term lending or overdraft facility to Government, and this may complicate negotiations on the TSA arrangements (Cem, 2014).

Generally, the Central Treasury operates the TSA for managing all public expenditures in “client account” mode, where the Central Bank executes all payments (indirect participation) on behalf of the CT. In other words, if specific conditions can be met (related to the information security, procedures, authorized personnel, and oversight mechanisms), the CT may become a direct participant of the interbank systems (RTGS and ACH) operated by the CB (“correspondent account” mode). To monitor the collection of revenues, the CT usually receives daily information from agent (commercial) banks (sometimes through CB), or revenue administration(s) about the details of transactions through interfaces between the FMIS platform and these external systems (Cem, 2013). This study is therefore anchored on Adeolu’s definition and the study will evaluate Treasury Single Account as a measure of effective management of public funds in Ekiti State, Nigeria.

Theoretical Review
Treasury Single Account adoption and implementation was based on a number of different theories of socioeconomic accounting borrowed to form sound foundation (Ekubiat and Ime. 2016). Examples are:

**Stakeholder Theory:** Stakeholders’ theory provides rich insights into the factors that encouraged government in relation to the adoption and implementation of Treasury Single Account (Ekubiat and Ime. 2016). The theory assumed that adoption of Treasury Single Account by the federal government is a product of the pressure from stakeholders/citizens majorly against corruption. It opined that the government will respond to the expectations and concerns of powerful stakeholders and some of the responses will be in the form of strategic opinions (Yusuf and Mohammed, 2016).

**Modern Money Theory (MMT):** It is a theory that aggregates the central bank and the treasury into a government sector that finances itself through monetary creation such that financial stand of the treasury and the central bank are so interdependent that both of them are constantly in contact in order to make fiscal and monetary policy run smoothly (Ekubiat and Ime. 2016).

**Public Finance Management Theory:** Treasury Single Account (TSA) mainly is to avoid misapplication of public funds (Ekubiat and Ime. 2016). This theory is based on the assumption that all aspects of financial resources mobilization and expenditure should be well managed in government for the benefits of the citizenry (Ekubiat and Ime. 2016). It includes prioritization of programmes, mobilization of resources, the budgetary process, efficient management of resources and exercising control to guide against threats (Grubber, 2005).
Empirical Review
The Federal Government of Nigeria has implemented Treasury Single Account (TSA) in order to avert this threat and coupled with the present country's dwindling economy, the need to properly manage the scarce financial resources became more expedient but State Governments of Nigeria have been left-out (Ekubiat and Ime, 2016).
According to Ahmed (2016), the Treasury Single Account (TSA) was recently implemented fully in the Nigerian economy by the present government in order to ensure prudence and accountability in the management of financial resources. Applying the TSA, government expects to block all leakages of financial resources of the government and also ensure a healthy financial management system. The study therefore provides the conceptual meaning of the TSA and also suggests its expected benefits to the economy of Nigeria such as unification of various Accounts of government, enhanced system of financial management and control, reduction of the costs of government borrowing and ensuring of best utilization of government financial resources (Ahmed, 2016). The study also examined the objectives of the TSA systems and its various Accounts such as TSA main account, Subsidiary Account, ZBAs, Transit and Imprest Account among others. The study after discussing the prospects of the TSA system and its challenges concluded that the system requires political will, honesty and determination so as to overcome the various challenges identified in the paper in order to achieve the expected benefits of the system (Ahmed, 2016).

Methodology
This is a survey research based on survey design (Sunday, Oro, Ogar, Imong, Jacob and Rim, 2017). It involves gathering of data on relevance of Treasury Single Account in blocking financial leakages in the management of public funds in Nigeria (Zayol, Iorlaha and Nege, 2017). The study population used in this research comprises of workers in the finance offices of Federal Ministries, Departments and Agencies (MDAs) residents in Ekiti State. In order to have a sizeable number for this study, the views of the most senior officers in the finance offices of the MDAs in Ekiti were sought for and the final judgement was based on the involvement of the selected staff in the operations of the TSA in their respective MDAs. In view of this, a total of forty workers were selected for the study out of the population of one hundred and fifty-eight in their finance sections, giving an average of ten workers per selected agency. The number of staff selected per agency is as presented in Table 1.

| S/N | Name of the organisation                        | Number of staff in the finance section | Number of staff selected | Percentage of selected staff |
|-----|------------------------------------------------|---------------------------------------|--------------------------|------------------------------|
| 1   | The Federal Polytechnic, Ado-Ekiti             | 104                                   | 13                       | 12.5                         |
| 2   | Federal Pay Office, Ado-Ekiti                 | 35                                    | 10                       | 28.6                         |
| 3   | Corporate Affairs Commission, Ado-Ekiti       | 9                                     | 7                        | 77.8                         |
| 4   | Nigerian Security & Civil Defence Corps, Ado-Ekiti | 10                                   | 10                       | 100                          |

Source: Author’s Field Survey (2017)
Validity and Reliability of the Test Instrument

Validity

A test instrument is regarded to be valid if it measures what it is supposed to measure. In testing for the validity of the questionnaire used for the study, 25 copies of questionnaire were distributed on the field to the top staff members in the finance sections of the selected MDAs in Ekiti State. The questionnaires were later collected and analyzed using split-half method. The inter-item correlation coefficient of 0.882 was obtained as shown in Table 2. The implication of this was that the instrument used was valid since the inter-item correlation coefficient (0.882) was high and positive.

| Table 2: Summary of the Split-Half calculated for testing the Validity of the Research Instrument used |
|---------------------------------------------------------------|-------------------------------------------------|
| Mean                     | No. of items |
|---------------------------|--------------|
| Inter-item correlation Part 1 | 0.914          | 4\(^{a}\) |
|                          | 0.894          | 3\(^{b}\) |
|                          | 0.882          | 7      |
| Part 2                   |               |        |
| Both parts               |               |        |

Source: Author’s computation, 2017

Reliability Test

A test instrument is said to be reliable if it measures consistently over time the same instrument/item and produce results that are consistently similar. This implies that any variation in the result may be insignificant to produce sufficient evidence that the instrument used is not reliable. Therefore in this study the Cronbach’s Alpha coefficient was used to test the data gathering instrument for reliability. The Cronbach Alpha coefficients of 0.971 and 0.939 were obtained for both parts of the test instrument as shown in Table 3. The Cronbach values of 0.971 and 0.939 for both parts of the instrument showed that the test instrument used was reliable. This assertion was hinged on the premise that the variation in Cronbach Alpha obtained for both split-half of the test instrument was insignificant.

| Table 3: Summary of Results of Reliability Test for the Test Instrument |
|---------------------------------------------------------------|-----------------|
| Cronbach's Alpha Part 1 Value                               | .971            |
| N of Items                                                  | 4\(^{a}\)       |
| Part 2 Value                                               | .939            |
| N of Items                                                  | 3\(^{b}\)       |
| Total N of Items                                           | 7               |
| Correlation Between Forms                                  | .943            |
| Spearman-Brown Equal Length                                | .970            |
| Coefficient Unequal Length                                 | .971            |
| Guttmann Split-Half Coefficient                            | .896            |
Results and Discussion

Analysis and Interpretation of Research Questions

In the analysis that follows in this section, it is necessary to assess overall reaction to each statement. This is achieved by comparing the mean of the responses with the midpoint of the scale which in this case is 2.0. A score above 2.0 indicates agreement while a score below 2.0 indicates disagreement (Mathematics Stack Exchange, 2014). It is also important to ascertain the diversity and variability of a set of data in order to analyse them and come to useful conclusions about the population or the sample being observed (Mathematics Stack Exchange, 2014). Standard deviation was used to measure locations of the observations in relation to the mean.

Table 4: Percentages and Arithmetic Mean of TSA Blockage of Financial Leakages in Public Funds Management

| S/N | STATEMENTS                                                                 | 0 % | 1 % | 2 % | 3 % | 4 % | Mean Score | Std. Dev. |
|-----|---------------------------------------------------------------------------|-----|-----|-----|-----|-----|------------|-----------|
| Q.1 | Payment management functions are executed by the Central Treasury through automated processes supported by FMIS | 10  | 7.5 | 15  | 50  | 17.5 | 2.58       | 0.013     |
| Q.2 | Payment control functions are performed by CT through automated processes supported by FMIS. | 0   | 5   | 20  | 57.5| 17.5 | 2.88       | 0.061     |
| Q.3 | Payment control functions to check compliance with the Banking legislation are performed by CB through automated processes supported by CB information systems. | 5   | 20  | 10  | 50  | 15   | 2.50       | 0.00      |
| Q.4 | CB GL captures all flows in TSA bank accounts through their accounting system/GL on a daily basis. | 2.5 | 10  | 25  | 42.5| 20   | 2.68       | 0.030     |
| Q.5 | Agent Banks transfer all revenues to the CT's designated TSA bank account at the CB on a daily basis through online connections to RTGS/ACH. | 5   | 12.5| 20  | 45  | 17.5 | 2.58       | 0.013     |
| Q.6 | Central Treasury submits all payment requests in required formats through CT/CB TSA interface from a secure electronic payment center through automated processes supported by FMIS on a daily basis. | 0   | 12.5| 27.5| 45  | 15   | 2.63       | 0.021     |
| Q.7 | CB sends bank statements from the RTGS and ACH about the details of all TSA transactions through automated processes on a daily basis. | 10 | 15 | 30 | 30 | 15 | 2.25 | 0.04 |
| Q.8 | CB sends bank statements from the CB General Ledger about the flows in TSA bank accounts through automated processes on a daily basis. | 5 | 12.5 | 30 | 42.5 | 10 | 2.40 | 0.016 |
| Q.9 | Each TSA transaction must contain a unique identifier which can be used to link the payment or receipt | 2.5 | 7.5 | 25 | 32.5 | 32.5 | 2.85 | 0.056 |
| Q.10 | RTGS and ACH payment controls include checking the bank accounts against the "black list" maintained | 5 | 15 | 22.5 | 47.5 | 10 | 2.43 | 0.011 |
| Q.11 | Central Treasury submits all payment orders electronically from FMIS to RTGS/ACH, without any manual intervention. | 7.5 | 10 | 40 | 25 | 17.5 | 2.35 | 0.024 |
| Q.12 | Authentication and authorization (type of digital signature used; storage of the digital certificates) | 5 | 17.5 | 20 | 40 | 17.5 | 2.48 | 0.003 |
| Q.13 | Privileged access (who has privileged access to TSA databases and interbank system platforms). | 2.5 | 10 | 30 | 42.5 | 15 | 2.58 | 0.013 |
| Q.14 | Data security and integrity (solutions for secure data transfer + encryption of data in transit). | 7.5 | 7.5 | 20 | 25 | 40 | 2.83 | 0.053 |
| Q.15 | Password for all user types. | 7.5 | 5 | 7.5 | 45 | 35 | 2.95 | 0.072 |

**Overall Mean and Std. Deviation** | 2.60 | 0.030 |

**Source:** Author’ Computation (2017).

**Keys:** CT-Central Treasury, CB-Central Bank, RTGS-Real Time Gross Settlement system, ACH-Automated Clearing House, GL-General Ledger, FMIS- Financial Management Information System.

**Interpretation**

All the responses to statements in Table 4.1 agreed that TSA can block financial leakages in public funds management because the corresponding mean to each statement is above the midpoint value of 2.0. The overall mean of the research question is 2.60, the means of statements 1, 3, 5, 7, 8, 10, 11, 12 and 13, that is 9 statements out of 15 statements are below the overall mean while the means of statements 2, 4, 6, 9, 14 and 15, that is 6 statements out of 15 statements...
are above the overall mean. Statement 15 which says there is password for all the user types in TSA operations has the highest arithmetic mean of 2.95 indicating that it is the most agreed to by the respondents, while statement 7 which says that Central Bank sends bank statements from the RTGS and ACH about the details of all TSA transactions through automated processes on a daily basis has the least mean of 2.25 indicating that it is the least agreed to by the respondents. By comparing the overall standard deviation of 0.030 with the overall mean score of 2.60, it shows that every observation is about 0.030 away from the mean which implies that the variability in this set of data is insignificant (Lewis, 1971).

Assessment of Financial Leakage Blockages in Public Funds Management by TSA

The total rating was calculated by applying equation 1 [23] to the raw data obtained from the respondents to the questionnaire.

\[
\text{Total rating} = \frac{\sum \text{points scored under all categories}}{(15 - \text{total of } "n/a") \times 4} \times 100
\]

The following grades were used to indicate the overall performance based on the total rating:

- Very Weak: below 30%
- Weak: 30% - 49.9%
- Good: 50% - 69.9%
- Very Good: 70% - 89.9%
- Excellent: 90% and above

As shown in Table 5 and Figure 1, it is evident that the respondents from the four organisations rated the performance of TSA in blocking financial leakages as average. The highest mean rating value was recorded by the FPO (67.2%), followed by the FPA (66.8%), CAC (62.4%) while the lowest was recorded by the NSCDC (57.2%).

Table 5: Blockage of Financial Leakages in Public Funds Management by TSA

| Respondent | % Rating of FPA | % Rating of FPO | % Rating of NSCDC | % Rating of CAC |
|------------|----------------|----------------|------------------|----------------|
| 1          | 76.7           | 66.7           | 51.7             | 83.3           |
| 2          | 40             | 50             | 56.7             | 58.3           |
| 3          | 70             | 85             | 71.7             | 55             |
| 4          | 78.3           | 76.7           | 66.7             | 43.3           |
| 5          | 53.3           | 65             | 73.3             | 43.3           |
| 6          | 58.3           | 70             | 73.3             | 80             |
| 7          | 43.3           | 75             | 30               | 73.3           |
| 8          | 75             | 65             | 50               | -              |
| 9          | 70             | 43.3           | 56.7             | -              |
| 10         | 75             | 75             | 41.7             | -              |
| 11         | 78.3           | -              | -                | -              |
| 12         | 80             | -              | -                | -              |
| 13         | 70             | -              | --               | -              |
| Average    | 66.8           | 67.2           | 57.2             | 62.4           |

Source: Author’ Computation (2017).
Figure 1: Assessment of Blockage of Financial Leakages in Public Fund Management by TSA

Legends:
FPA- The Federal Polytechnic, Ado Ekiti
FPO- Federal Pay Office Ado Ekiti
NSCDC- Nigeria Security and Civil Defence Corps, Ado Ekiti
CAC- Corporate Affairs Commission, Ado Ekiti

Testing of Formulated Study Hypothesis
To test for significance of the formulated hypothesis, the T-statistic was used. The decision rule was that if T-calculated is less than the T-table value then the null hypothesis should be accepted, otherwise rejected and accept the alternative.

Study Hypothesis
H₀₁: Treasury Single Account is not effective in blocking financial leakages in public funds
The calculated T-value for this hypothesis is 28.04 with p value 0.00 which is less than 0.01. At five percent level of significance the table value is 2.719. Since the T-calculated (28.04) is greater than the table value (2.719) the null hypothesis was rejected and the alternative accepted. We therefore conclude that there is a significant relationship between financial leakage blockages and TSA effectiveness. This means that TSA is effective in blocking financial leakages in public funds (Project Writers, 2016). This finding is in agreement with the expectation of Ahmed (2016) where he said the TSA government is expected to block all leakages of financial resources of the government and also ensure a healthy financial management system.
Summary, Conclusion and Recommendations

Summary
It was found from responses to questionnaire statements in respect of the research question that the overall average mean score of 2.60 indicate that respondents agreed that TSA block financial leakages in public fund management. It was also found that the most agreed to statement here was the statement that states that there is password for all the user types in TSA operation, it has the highest arithmetic mean score of 2.95 while the least agreed to statement was that which states that Central Bank send bank statements to RTGS and ACH about details of all transactions through automated processes on a daily basis with mean score of 2.25.

Conclusion
The study concluded that the Treasury Single Account as a System is effective in blocking financial leakages of public funds. In line with this, it was justified by the outcome of the hypothesis testing where the null hypothesis was rejected and the statement that Treasury Single Account is effective in blocking financial leakages in public funds was accepted.

Recommendations
However, for better impact of TSA in achieving the objective of blocking financial leakages, the following improvements are recommended:

i. Central Bank should improve on sending bank statements to RTGS and ACH about details of all transactions through automated processes on a daily basis,

ii. Government should improve on oversight functions for payment and settlement systems through automated processes to be performed by the central bank.

References
Aderinokun, K. (2010), “Crisis Rocks NEITI over Allegation of Corruption”, This Day (Lagos), Tuesday, 24 August.

Adeolu, I. A. (2015), Understanding The Treasury Single Account (TSA) System – Things You Should Know. Business & Economy, Market Development, 2 (3), 14-25.

Agbe, I. E., Terzungwe, A. S., and Igabee, U. S. (2017), Treasury Single Account: Nature Origin, Challenges and Lesion for Nigerian experience, Imperial Journal of Interdisciplinary Research, Vol. 3, No 5: 787-793.

Ahmed, A. I. (2016). Treasury Single Account (TSA) as an Instrument of Financial Prudence and Management: Prospects and Problems. Research Journal of Finance and Accounting, www.iiste.org. (Online) 7 (4): 2222-2847.

Ali, H., & Allister, J. M. (2004), “Treasury Diagnostic Toolkit”, World Bank Working Paper # 19, 2004.

Biagio, B., & Massimo, C. (2001), “The Oversight of the Payments Systems: A Framework for the Development and Governance of Payment Systems in Emerging Economies”, World Bank Report, July 2001

BIS-CPSS. (2005), “Central Bank Oversight of Payment and Settlement Systems”, Bank for International Settlements (BIS) - Committee on Payment and Settlement Systems (CPSS), July 2005.
Cem, D. (2014), Treasury Single Account Rapid Assessment Toolkit, Vol. 2. https://issuu.com/world.bank.publications/docs/treasury_single_account_rapid_assessment_toolkit

Cem, D. (2013). Treasury Single Account Rapid Assessment Toolkit. https://issuu.com/world.bank.publications/docs/treasury_single_account_rapid_assessment_toolkit

Daily Post. (2017), Nigerian Bureau of Statistics: Report on the Rate of Unemployment in Nigeria, Dec. 22nd, 2017.

Ekubiat, J. U., & Ime, E. E. (2016), The Adoption of Treasury Single Account (TSA) by State Governments of Nigeria: Benefits, Challenges and Prospects, *Journal of Finance and Accounting*, 4 (3), 126-130.

Eme, O. I., Chukwurah, D. C., and Ihenacho, E. N. (2015), Addressing Revenue Leakages in Nigeria, *Arabian Journal of Business and Management Review* (OMAN Chapter), 5 (4), 1-19.

Fatilе, J. O., & Adejuwon, K. D. (2017), Implication of Treasury Single Account (TSA) on the Cost of Governance in Nigeria: Buhari Civilian Administration in Perspectives, *International Journal of Advanced Studies in Economics and Public Sector Management*, 5 (2): 13-29.

Grubber, J. (2005), *Public Finance and Policy*, New York, Work Publications.

Katsouris, C. (2009), “Nigeria extractive industries transparency initiative” audit of the period 1999-2008 (popular version).

Lewis, P. W. (1971), Action limits for Internal Quality Control, *Clinica Chimica Acta*, 35 (1): 21-32

Mathematics Stack Exchange. (2014), Mean and Standard Deviation, https://math.stackexchange.com/questions...e-standard-deviation

Müller, M. (2010), Revenue transparency to mitigate the Resource Curse in the Niger Delta? Potential and reality of NEITI, Occasional Paper V, Bonn: Bonn International Centre for Conversion.

Ndubuaku, V. C., Ohaegbu, O. K., Nina, N. M. (2017), Impact of Treasury Single Account on the Performance of the Banking Sector in Nigeria, *IOSR Journal of Economics and Finance* (IOSR-JEF), 8(4):8-15.

Nicholas, S. (2009), Nigeria’s Extractive Industries Transparency Initiative: Just a Glorious Audit? London: Chatham House.

Nwankwo, S. N. P. (2017), Transition to Treasury Single Account (TSA) Scheme in Nigeria; Issues, Challenges and Prospects, *International Journal of Innovative Finance and Economics Research* 5(2):21-32.

Okonji, C. (2009), “NEITI exposed multibillion dollar financial discrepancies“ from (Nigeria Compass)

Olanipekun, W. D., Brimah, A. N., and Olowoleni, F. M. (2015), Treasury Single Account (TSA): A Strategy for Combating Corruption and Achieving Sustainable Development, *Journal of Sustainable Development in Africa*, 17 (5): 139-148

Opeyemi, O. A., Kehinde, A., Samuel, O., Faboyede, B., Peter, A. (2017), The Impact of Treasury Single Account on the Liquidity of Banks in Nigeria, *Journal of Accounting, Finance and Auditing Studies*, pp. 132-143.

Oyedele, T. (2015), Nigeria: What does the new treasury single account (TSA) hold for tax? PWC Nigeria, October 2015.
Project Writers. (2016), National Development Plan and Planning from 1968 Till Date; The Nigerian Experience, https://projectwriters.com.ng/prospects-developing-economy/.

Sailendra, P., and Israel, F. (2010), Treasury Single Account: Concept, Design and Implementation Issues, IMF Working Paper, Fiscal Affairs Department, pp. 1-45.

Sunday, A. E., Oro, B. L., Ogar, G. U., Imong, N. R., Jacob, G. E., and Rim, B. I. (2017), Treasury Single Account (Tsa), Integrated Payroll and Personnel Information System (Ippis), and Integrated Financial Management Information System (Ifmis): Application and Implementation Effects on Fraud Management in the Public Sector in Nigeria, IOSR JBM, 9 (7): 22-30.

The Guardian Editorial. (2015), Nigeria: Buhari on Treasury Single Account, allafrica.com/stories/201508281358.html.

Ugolor, D. (2009), “The Extractive Industries Transparency Initiative in Nigeria” http://www.eed.de/fix/files/doc/07-06_ugolor_eiti-nigeria.pdf U.S. Energy Information Administration (EIA), Nigeria country analysis brief, http://205.254.135.7/countries/cab.cfm?fips=NI

Yusuf, M. B. (2016), Effects of Treasury Single Account on Public Finance Management in Nigeria, Research Journal of Finance and Accounting, 7 (6): 164-170.

Yusuf, A., & Mohammed, S. B. (2016), Treasury Single Account (TSA) as an Effective Instrument of Financial Prudence and Management in Nigeria: Prospects and Problems, Nigerian Journal of Management Technology & Development, 7 (2), 200-207.

Zayol, P. I., Iorlaha, T., Nege, J. D. (2017), Effect of Treasury Single Account on the Liquidity of Deposit Money Banks in Nigeria, IOSR Journal of Economics and Finance (IOSR-JEF), 8 (4): 55-60.