



**POLAC INTERNATIONAL JOURNAL OF ECON & MGT SCIENCE (PIJEMS)**  
**DEPARTMENT OF ECONOMICS & MANAGEMENT SCIENCE**  
**NIGERIA POLICE ACADEMY, WUDIL-KANO**



## IMPACT OF CASH MANAGEMENT REFORM ON THE PERFORMANCE OF GOVERNMENT ENTITIES IN NIGERIA

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### Abstract

*Efficacy of cash management reform (CMR) has become a subject of debate in recent times going by the level of infractions on revenue renditions by government entities' in Nigerian public sector. The main objective of this study therefore, was to investigate the impact of cash management reform (CMR) on the performance of government entities' in Nigeria. While specific objectives are; ii) To examine how accounts fragmentation impact the Performance of government entities in Nigeria; and iii) To determine how revenue generation & blockage of leakages impact government entities performance in Nigeria. The study applied mixed method approach with a sample size of 306. Quantitative data was analysed using Partial Least Square-Structural Equation Model while qualitative data was analysed with thematic/NVIVO. Finding indicates that for every increase on the impact of Cash Management Reform there was an increment on the overall performance of government entities as a result of the effects on the reduction on infraction level in Nigeria. In line with the findings from this study, it was concluded that positive relation exist between cash management reform and performance of government entities in Nigeria. The study therefore, recommend that government should constantly re-assess cash management policies so as to curb infractions that encourage leakages and wastages.*

**Key words:** Liquidity Management; Cash Flow Optimization; Centralized Cash Management; Risk Mitigation.

### Introduction

The management of public funds is a critical function of government entities, as it ensures that resources are used efficiently and effectively to meet the needs of the public (World Bank, 2016). In Nigeria, cash management reform has been a topic of interest for several years, as the government has recognized the need to improve the management of public funds to achieve its development objectives. In recent years, the Nigerian government has implemented several cash management reforms aimed at improving the performance of government entities. One of the most significant reforms was the introduction of the Treasury Single Account (TSA) in 2015 (CBN, 2015). The TSA is a unified bank account through which all government revenues and payments are made, and it aims to reduce

the incidence of revenue leakages, minimize the borrowing costs of the government, and improve cash management efficiency (Olaniyi, Adeniji & Tijani, 2017).

Despite the implementation of cash management reforms in Nigeria, there is an insufficient empirical evidence on the impact of these reforms on the performance of government entities in Nigeria. Thus, this study seeks to fill this gap by examining the impact of cash management reform on the performance of government entities in Nigeria. The study draws on relevant literature on cash management reform and performance of organisations in Nigeria and other countries. The literature reviewed also the challenges associated with implementing cash management reforms, such as accounts fragmentation by ministry

departments and agencies'(MDAs), accountability failure on revenue generation and leakages as well as absence of the best practices in the management of cash in the government treasury (Oyedokun, 2016). The study provide empirical evidence on the impact of cash management reform on the performance of government entities in Nigeria. The study is important as it will provide insights into the effectiveness of cash management reform in Nigeria and inform future policy decisions on cash management reform in the country. Cash management is an essential function for government entities in Nigeria, as it involves the management of cash resources to ensure that there is enough cash on hand to meet operational needs and invest excess cash to generate additional income. Effective cash management can help government entities improve their financial health and achieve their objectives.

Several studies such as (Dorcas, 2017; Solanke, 2018; Oloruntoba, 2019; Abah and Tume, 2020; Abass, 2020; Ibrahim, 2022) have examined the impact of cash management on the performance of organizations. For example, Akinleye, Olugbade and Akinleye, (2017) found that effective cash management can improve the performance of small and medium-sized enterprises in Nigeria. Faboyede and Ajilore (2014) also found that effective cash management can improve the profitability of small and medium-sized enterprises in Nigeria. These studies suggest that effective cash management can improve the performance of organizations. However, there is a gap in the literature on the impact of cash management reform on the performance of government entities in Nigeria. Cash management reform involves the implementation of policies and procedures to improve cash management practices, such as cash forecasting, cash collection, disbursements, and investing. The impact of these reforms on the performance of government entities in Nigeria has not been adequately studied. Therefore, this study aims to evaluate the impact of cash management reform on the performance of government entities in Nigeria. Specifically, the study will examine the impact of cash management reform on the financial

performance of government entities in terms of revenue generation, cost reduction, accounts fragmentation, revenue generation & blockage of leakages and overall financial health with respect to operational performance of government entities in terms of efficiency, effectiveness, as well as service delivery. Efficient cash management is essential for the financial health of government entities in Nigeria. While several studies have examined the impact of cash management on the performance of private/corporate organizations, there is a need to look at it from the perspective of the performance of public entities in Nigeria. Hence, this study therefore, fill this gap in the literature by investigating the impact of cash management reform on the performance of government entities in Nigeria.

Cash management plays a crucial role in ensuring the smooth operation of businesses and organizations by effectively managing the company's most liquid asset being cash. This involves optimizing the cash flow cycle, monitoring liquidity, and making informed decisions to enhance financial stability. Several key aspects highlight the significance of cash management in facilitating operational efficiency. Effective cash management is essential for maintaining adequate working capital. According to Brigham and Ehrhardt (2013), working capital is the lifeblood of a business, and managing cash efficiently ensures that there are enough funds to cover day-to-day operational expenses. Maintaining optimal levels of liquidity is crucial for meeting short-term obligations. As Gitman and Zutter (2019) emphasized, businesses need to strike a balance between holding enough cash for immediate needs and investing excess funds to generate returns. In terms of risk mitigation, cash management helps mitigate financial risks by providing the necessary resources to navigate unforeseen circumstances. Mishkin and Eakins (2015) point out that having sufficient cash reserves enables organizations to weather economic downturns, emergencies, or unexpected expenses.

Also considering interest cost reduction, by optimizing cash balances, businesses can minimize interest costs associated with borrowing. According to Weston, Besley, and Brigham (2018), effective cash

management involves evaluating the cost of maintaining cash reserves versus the cost of borrowing, enabling organizations to make informed financing decisions. Access to accurate and timely cash flow information enables better decision-making. Ross, Westerfield, and Jordan (2018) highlight that well-managed cash flow data allows businesses to plan investments, negotiate favorable terms with suppliers, and capitalize on opportunities that arise. Maintaining healthy relationships with suppliers and creditors is crucial for business continuity. Efficient cash management ensures timely payments, enhancing the organization's credibility and fostering positive relationships (Van Horne & Wachowicz, 2008). Cash management therefore, is instrumental in the day-to-day functioning and long-term success of businesses and organizations. It provides the financial foundation for operational activities, risk mitigation, and strategic decision-making, contributing to overall stability and sustainability.

From the perspective of budgetary allocation to cash management in Nigeria, there is no gain-saying that effective cash management is critical for any government to ensure the smooth functioning of public services, meet financial obligations, and maintain economic stability. The allocation of funds for cash management in the government budget typically covers areas such as: Treasury Operations; Budgetary provisions are made to support the day-to-day treasury operations, including the receipt and disbursement of funds. This ensures that the government has the necessary liquidity to meet its financial obligations promptly.

**Debt Servicing;** Governments allocate funds to manage debt, including interest payments and debt repayments. Proper cash management is essential to ensure that debt obligations are met without disruptions, contributing to the country's creditworthiness.

**Public Expenditure;** Cash management is closely linked to budget execution. Adequate allocations are necessary to cover public expenditures, including salaries,

infrastructure projects, and various government programs. This helps in maintaining economic stability and supporting development initiatives.

**Emergency and Contingency Funds;** Governments may allocate funds for emergency situations or contingency reserves. This ensures that there are resources available to address unforeseen events or economic challenges, contributing to financial resilience (Budina, et al., 2012).

Cash management involves the efficient control and use of an organization's cash resources. The objectives and benefits of effective cash management are multifaceted, contributing to the overall financial health and stability of a business such as; **Liquidity Management** which is to ensure that the organization maintains sufficient liquidity to meet its short-term obligations. Liquidity management is crucial for firms to meet short-term obligations and to take advantage of unexpected investment opportunities" (Gitman & Zutter, 2019); **Minimization of Holding Costs**, this has to do with minimising the costs associated with holding excess cash holding costs while maintaining the necessary level of liquidity to meet short-term obligations (Ross, Westerfield, & Jordan, 2018); **Risk Mitigation** to mitigate the risk of financial disruptions by having adequate cash reserves is crucial for mitigating financial risks and navigating uncertainties that may arise in the business environment (Mishkin & Eakins, 2015); **Optimal Utilization of Surplus Cash** through investments or debt reduction involves deciding the optimal level of cash to hold, considering the opportunity cost of not investing surplus cash in interest-bearing assets (Brigham & Ehrhardt, 2013); **Benefits of Cash Management** entails **Working Capital Efficiency** to enhance the efficiency of working capital management contributes to efficiency, supporting day-to-day operational activities (Gitman & Zutter, 2019); **Reduce interest costs** associated with borrowing by managing cash effectively as a **Well-managed cash balances** can help minimize interest costs and optimize the cost of maintaining cash reserves versus borrowing (Weston, Besley, & Brigham, 2018); **Improved**

Decision Making to provide timely and accurate information for better financial decision-making as access to accurate cash flow information enables better decision-making in terms of investments, negotiations, and overall financial planning (Ross, Westerfield, & Jordan, 2018); Enhanced Credibility to maintain good relationships with suppliers and creditors, enhancing organizational credibility for efficient cash management ensures timely payments, fostering positive relationships with suppliers and creditors (Van Horne & Wachowicz, 2008). These objectives and benefits collectively underscore the importance of robust cash management practices in ensuring the financial stability and sustainability of businesses as well as government entities'.

Strategic Investments; Budget allocations may include funds for strategic investments that contribute to economic growth. Proper cash management is vital to ensure that these investments are funded without creating undue financial strain.

#### Statement of the Problem

The trend on Cash Management implements at the treasury and entities' level are becoming more self-ruled in view of its waves that has been moving from one-size-fits-all solutions to a hyper-modular approach. The situation is characterized by high level of Public Sector Financial Management (PSFM) infraction that encourages a system of "you take the solution that suit you and integrate it into your existing solution stack" so that you can pick the best solutions from different vendors according to your entity's need.

#### Research Questions

(i) How has Cash Management Reform (CMR) impacted on the performance of government entities in Nigeria?; (ii) Does accounts fragmentation impact the Performance of government entities in Nigeria? And (iii) How does revenue generation & blockage of leakages impact government entities performance in Nigeria?

#### Research Objectives

The main objective of the study is

- (i) to investigate the impact of Cash Management Reform on the performance of government entities' in Nigeria; While the specific objectives are:-
- (ii) ii) To examine how accounts fragmentation impact the Performance of government entities in Nigeria.
- (iii) iii) To determine how revenue generation & blockage of leakages impact government entities performance in Nigeria

#### Research Hypothesis

H<sub>0</sub>1: Cash Management Reform (CMR) has no significant impact on the performance of government entities in Nigeria.

H<sub>0</sub>2: Performance of government entities has no significant relationship with the level of revenue generation & blockage of leakages in the government entities in Nigeria.

H<sub>0</sub>3: Accounts fragmentation has no significant relationship with the Performance of government entities in Nigeria.

#### Literature Review

##### Conceptual Review

Cash management reform is a process of improving the management of government funds by adopting modern financial management practices (Abbas, 2020). The reform aims to improve financial management by increasing transparency, reducing corruption, and enhancing the effectiveness of public service delivery. In Nigeria, cash management reform has been ongoing since the 1980s, with the most recent reform initiative being the Treasury Single Account (TSA) policy implemented in 2015 (Central Bank of Nigeria, 2015). Cash management is the process of managing the cash inflows and outflows of an organization to ensure that there is enough cash on hand to meet operational needs and invest excess cash to generate additional income

(Akinleye et al., 2017). Effective cash management involves balancing the need for liquidity and profitability while minimizing the risk of cash shortages or excesses.

Effective cash management involves several key activities, including cash forecasting, cash collection, disbursements, and investing. Cash forecasting involves estimating the amount of cash that will be received and disbursed during a specific period. Cash collection involves ensuring that cash is collected from customers in a timely manner, while disbursements involve paying bills and other expenses in a timely manner. Investing excess cash is also a critical component of cash management. Investing excess cash can help an organization generate additional income while minimizing the risk of losing the principal investment. Common investment options include short-term and long-term investments, such as treasury bills, commercial papers, bonds, and money market funds. By managing their cash resources effectively, organizations can improve their financial health and achieve their business objectives. The concept of performance of government entities in Nigeria refers to the extent to which government institutions achieve their objectives in a timely, effective, and efficient manner while also ensuring accountability and transparency in the use of public resources (Anwuka, 2016). Measuring the performance of government entities is crucial in assessing their effectiveness in providing services to citizens and promoting economic development. In Nigeria, the performance of government entities is measured through various performance indicators, such as budget execution rate, revenue generation, service delivery, and citizen satisfaction (Abbah & Tume, 2020). Performance indicators are used to evaluate the effectiveness and efficiency of government entities in achieving their objectives and to identify areas for improvement. The performance of government entities is measured through various performance indicators and is influenced by various factors (Gupta, 2014). The performance of government entities is influenced by various factors, including the availability of resources,

the quality of leadership and governance, the level of institutional capacity, and the effectiveness of policies and programs (Abah and Tume, 2020). Effective performance management is crucial for achieving government objectives and promoting economic development. It requires the implementation of sound financial management practices, including the efficient use of public resources, adherence to budgetary controls, and the use of performance-based budgeting (World Bank, 2016). Performance of government entities refers to the ability of government agencies to achieve their goals and objectives effectively and efficiently. The concept of performance of government entities is multidimensional and can be measured in terms of several factors, including financial performance, service delivery, and accountability. Financial performance is one of the most common measures of the performance of government entities. Financial performance refers to the ability of government entities to manage their financial resources effectively and efficiently, including revenue collection, expenditure management, and debt management (Gupta, 2014). Financial performance can be measured using indicators such as revenue growth, expenditure control, debt-to-GDP ratio, and budget implementation rates. Service delivery is another critical measure of the performance of government entities. Service delivery refers to the ability of government agencies to provide quality services to the public, such as healthcare, education, and infrastructure development (OECD, 2015). Service delivery can be measured using indicators such as access to services, service quality, and customer satisfaction. Accountability is also an essential aspect of the performance of government entities. Accountability refers to the responsibility of government agencies to report on their performance and be held accountable for their actions by the public and other stakeholders (UNDP, 2015). Accountability can be measured using indicators such as transparency, stakeholder engagement, and responsiveness to feedback. Measuring the performance of government entities is essential to ensure that resources are used effectively and efficiently to meet the needs of the public.



## Theoretical Review

**Resource Dependency Theory:** Resource dependency theory suggests that organizations rely on external resources to achieve their objectives, and the nature of their relationship with external entities can affect their performance. In the context of cash management reform, resource dependency theory suggests that government entities can establish relationships with banks and other financial institutions to ensure that they have access to cash resources when needed (Pfeffer and Salancik, 1978). The Resource Dependency Theory (RDT) was proposed by Jeffrey Pfeffer and Gerald R. Salancik in 1978. The theory suggests that organizations are dependent on external resources such as capital, technology, and expertise to survive and grow (Pfeffer & Salancik, 1978). Organizations must establish and maintain relationships with their external environment to gain access to necessary resources. RDT has been criticized for its emphasis on resource dependency as the sole factor that drives organizational behavior. Critics argue that the theory fails to consider the role of internal factors such as organizational culture, leadership, and strategy in shaping organizational behavior (Liu et al., 2017). Additionally, RDT has been criticized for its focus on resource acquisition and neglect of resource utilization, distribution, and control (Kumar & Sharma, 2018). Another criticism of RDT is that it is limited in its ability to explain how organizations can overcome resource dependencies. The theory assumes that organizations are passive recipients of resources and fail to consider how organizations can actively manage their dependencies and create new resources (Liu et al., 2017). While RDT has been influential in shaping our understanding of organizational behavior, it has also faced criticism for its narrow focus on resource dependency and neglect of internal factors that influence organizational behavior. Nonetheless, the theory remains relevant to understanding the complex relationships between organizations and their environment. Resource Dependency Theory (RDT) is related to Cash Management Reform and Performance of government entities in that it recognizes the importance of external resources in the functioning and

performance of government entities' as the theory emphasizes that government entities' are dependent on external resources such as grants, statutory allocations, human capital, technology, as well as expertise to survive and grow. In the context of government entities, cash management reform aims to improve the management and utilization of financial resources to achieve better performance outcomes. This includes ensuring that government entities have access to adequate financial resources and are able to manage those resources effectively. By implementing effective cash management practices, government entities can better manage their resource dependencies and ensure that they have the necessary resources to achieve their goals. Additionally, RDT recognizes that organizations must establish and maintain relationships with their external environment to gain access to necessary resources. In the context of government entities, this includes building relationships with donors, creditors, and other external stakeholders to secure financial resources. Effective cash management practices can help government entities to maintain these relationships and ensure that they have access to the necessary financial resources to support their operations and achieve their performance objectives.

By and large, RDT provides a useful framework for understanding the relationship between cash management reform, resource dependency, and performance outcomes in government entities. By recognizing the importance of external resources and the need to manage resource dependencies, RDT can help to guide the implementation of cash management reform initiatives and support better performance outcomes in government entities.

## Empirical Discourse

**Cash Management Reform (CMR)/Treasury Single Account (TSA)**

Cash Management Reform (CMR) also known as Treasury Single Account (TSA) is an essential tool for consolidating and managing governments' cash resources was reviewed for experiences from several countries perspectives. Evidence from various studies

suggests that it is meant for developing countries where banking arrangements with respect to cash management are opened to high risks. Empirical evidences at this level seems to be close to none existence beside the concepts and benefits being advocated by donor agencies such as World Bank (WB) and International Monetary Fund (IMF). Oyedokun, (2016) reviewed the history, workings and benefit of the Treasury Single Account (TSA) in Nigeria using meta-analysis methods. The study discovered that despite the numerous benefits of the adoption of TSA, it still has some challenges and therefore concluded that the place of Treasury Single Account in Nigeria cannot be underestimated in ensuring that this Nation is free from corruption of public officers.

Similarly, Sunday, Oro, Ogar, Imong, Jacob and Blessing (2017) focused on the effect of the implementation of TSA, IPPIS and FMIS on fraud in Public Interest Entities in Nigeria. The linear regression model was employed in establishing the relationship between variables. Results of the statistical test revealed that TSA, IPPIS, and IFMIS have positive and significant relationship with Fraud and fraud management as well as jointly impact the performances of Public Interest Entities. The study is of interest in view of The theoretical structure of the work which was anchored on the Meta Theory Model, Circumvention Innovation Theory and Public Finance management theory which highlight the relationship between computerized innovations in government establishments and fraud management although, fraud was the main focus.

Similarly, Ofurum, Oyibo and Ahuche (2018) empirically examined the extent to which TSA has improved Federally Collected Revenue (FCR) and Gross Domestic Product (GDP) of the economy. The study empirically examined the extent to which TSA has improved Federally Collected Revenue (FCR) and Gross Domestic Product (GDP) of the economy. Secondary data sources from Central Bank of Nigeria statistical bulletin and economic reports were utilized for the study. The observations were recorded on

quarterly basis from Q3-2013 to Q2-2017. The data were divided into two periods: Pre TSA period (Q3-2013 to Q2-2015) and Post TSA period (Q3-2015 to Q2-2017). A pre post analysis (difference in means test) was carried out using SPSS version 20. Findings revealed that GDP of the country significantly increased after the implantation of TSA. In another perspective, Abubakar, Sani and Mohammed, (2019) examined the impact of the Treasury Single Account (TSA) on bank liquidity in Nigeria. Time series data was used to determine the relationship between the variables over the period of 48 months ranging from September 2013 to August 2017. The study employed a Robust Least Square (RLS) technique to estimate the variables under investigation. The findings revealed that the Treasury Single Account has a positive and statistically significant impact on bank liquidity.

Equally, the interest rate has a positive and statistically significant impact on bank liquidity. Consequent upon the major findings, government, banks and members of the business community should be further educated on the positivity and efficacy of the Treasury Single Account in controlling public looting, fraud and other forms of corruptions and alternatively boosting public fund which will automatically reduce public debt. Sam, Richmond, Rosemond, and Sam-Quarm, (2020) conducted a cross-sectional research on the Ramifications of the Treasury Single Account, the Ifmis Platform, and Government Cash Management in Developing Economies in the Wake of the Covid-19 Pandemic: Ghana's Empirical Example. through non-probability and purposive sampling with 200 respondents. Face-to-face interviews, structured closed-ended and open-ended Questionnaires which were administered online through email application via Google Forms (as a result of the novel, dreaded, and disruptive Covid-19 pandemic), coupled with PETS resulted in startling revelations. Major finding of the study was that a government lacking an efficient and effective control over its cash resources will definitely pay for its institutional deficiencies in multiple ways.

Sunday and Dan, (2020) examined the asymptomatic link between Treasury Single Account (TSA) and economic growth in Nigeria. Specifically, the study examined the post TSA era and the extent to which TSA implementation affect revenue generation, employment generation, and improvement in living standards. An asymptomatic evaluation was undertaken to uncover the degree of undisclosed and indirect influence of the operation of the treasury single account on the growth of the economy. Expo-facto research design was used and data for the study were obtained from the Federal Inland Revenue tax statistics report and UN data site. Data collected were analyzed using the ordinary least square regression method, and descriptive statistical method. The research results indicate that the implementation of the treasury single account has a significant scientific influence on the growth of the economy in real GDP terms, while revenue generated by government and per capita income were negatively influenced by the operation of TSA. The descriptive result shows that non-oil revenue was higher than revenue from custom and excise duties, and other ministerial-based revenue. Based on the findings of the study, it was concluded that TSA affects economic growth in both positive and negative dimensions.

Ojong, Agba, Eteng, Maruf, Akintola and Usung, (2021) assessed the impact of Treasury Single Account (TSA) on revolving funds in public organisations, with particular reference to drug revolving fund in government hospitals in Nigeria. Specifically, the study examines the relationship between appropriation control of TSA, cash management of TSA, payment mechanism of TSA and Drug Revolving Fund (DRF) in public hospitals. Survey method was adopted and 1020 questionnaire were administered. Data generated study were presented in tables and simple percentile. Hypotheses were also tested using Pearson Product Moment Correlation Coefficient (PPMC). Findings established significant links between appropriation control of TSA, cash management of TSA, payment mechanism of TSA and DRF in public hospitals. It was recommended among other that management should

carryout monthly review of cash management of DRF to ensure that adequate funds are availability for drugs administration in public hospitals.

Dharitri, Sanjeev and Muthukumar, (2021) brought out the path travelled in implementing the TSA system in CABs in India with the lessons learnt, challenges ahead and the way forward towards Universalization of TSA across all CABs. The first attempt to bring Central Autonomous Bodies (CABs) within the ambit of the Treasury Single Account System (TSA system) was initiated in the financial year 2017-18 by the Government of India with broad contours of the system being laid down. The objective of TSA was to introduce Just in Time (JIT) release of funds so as to minimise the cost of borrowing and to prevent idle parking of funds in subsidiary accounts after release from the Consolidated Fund of India. Findings showed that the Pilot projects were launched with the Indian Institute of Technology- Delhi (IIT-Delhi) and Indian Council of Medical Research(ICMR) . The lessons learnt in implementing the pilot projects were utilized to extend the TSA system to another 14 CABs in the Financial Year 2020-2021. The system has been extended to 14 CABs with a fair degree of success and now, the Government of India has decided to extend the TSA system to another 40 ABs in the next Financial Year.

## **Methodology**

### **Research Design.**

This study applied mixed method approach as a convergent parallel where questionnaire and interview survey research methods were used to collect data. The primary data was collected through a properly structured questionnaire (quantitative approach) and semi-structured interviews (qualitative approach (Creswell, 2013; David, 2014). This approach enabled the researcher the opportunity of an interface interaction with the targeted respondents to source detailed information about their perceptions, candid opinion and share experiences on the subject matter of this study.



### Sampling Technique and Sample Size

A sample size of 306 (three) hundred and six) was derived using Krejcie & Morgan (1970) sample size determination table for the quantitative aspect while purposive sampling technique was adopted to select 3 (three) respondents for the interview (qualitative aspect) in accordance with Stephen, Jenn and Ann (2005) recommended threshold. Consequently, 3 (three) key respondents directly connected with the Government Integrated Financial Management Information System (GIFMIS) implementation were randomly selected, The selection was informed by the subjective nature of qualitative approach and on the basis of the researcher's experience and perceived judgment with the assurance that those respondents so selected would provide fact based responses on the Influence of Integrated Financial Management Information System (IFMIS) implementation and performance of government entities' in Nigeria. (Kombo & Tromp, 2009).

### Method of Data Collection

Data for this study was collected through primary source with the administering of well-structured 5 (five) Likert Scale Questionnaire for the quantitative and for the qualitative approach, the targeted respondents were interviewed using semi-structured questions in order to have a proper understanding of the subject matter of the study.

### Data Analysis and Technique

The study employed both descriptive and inferential statistical techniques to analyze the data collected from the survey. Descriptive statistics provides a snapshot of construct/variable using frequency, mean score and standard deviation to describe the socio - demographic characteristics of the respondents. The mean score and standard deviation was determined for each item used in the study to measure each construct on the research instrument which produced summary of responses upon which inferences were drawn. Diagnostic preliminary test of normality (skewness statistics and kurtosis statistics), linearity and multi-collinearity (correlation matrix, tolerance value, variance inflation factor) to fulfil the basic underlying assumptions of the regression

analysis were conducted to confirm the nature of the data distribution for each construct (Pallant, 2010; Hair, Hult, Ringle, & Sarstedt, 2014)

The quantitative data obtained were analysed using Partial Least Square-Structural Equation Model (PLS-SEM) regression analysis to establish the relationship between the variables of the study. PLS-SEM allows great flexibility on how the equations are specified and can accommodate multiple related simultaneous equations thereby offering a number of advantages over more familiar methods, and provides a general framework for linear modeling (Kante, Chepken & Oboko, 2018). It is more suitable in a complex setting to validate large-hierarchical models by providing robust solutions (Chin, Peterson, and Brown 2008) and focuses on the prediction of a specific set of hypothesized relationships that maximizes the explained variance in the dependent variables (Hair, *et al*, 2014). The qualitative data collected for the study were analyzed using descriptive and narrative analyses. This method of analyzing qualitative data has history of simplicity in its application and reliability in its results

### Model Specification

The study adapted the model of Effiong et al (2017) to establish the relationship between TSA, IPPIS, IFMIS and fraud management in Public Sector (FMPS) in Nigeria with linear regression model stated as:-

$$FMPS = \beta_0 + \beta_1 TSA + \beta_2 IPPIS + \beta_3 IFMIS + \mu \dots (1).$$

Where: FMPS = Fraud management in Public Sector

TSA = Treasury Single Account

IPPIS = Integrated Personnel & Payroll Information System

IFMS = Integrated Financial Management Information System

$\mu$  = Error Term

The model specified in equation (1) above, was modified in order to achieve the objectives of this study as stated below:

$$GEP = \beta_0 + \beta_1 CMR_i + \beta_2 RIL_i + \beta_3 MAF_i + \beta_4 CAM_i + \mu \quad (2)$$

Where:

GEP = Government Entity Performance

CMR = Cash Management Reform

RIL = Revenue Inflow Leakages

MAF = Ministry/Entities' Account Fragmentation

CAM = Cash Wastage Minimisation

## Results and Discussion

### Demographic Profile of the Respondents

The study population was 1504 while sample size is 306. Respondents' demographic details showed more male respondents (178) than female respondents (128). Majority of the respondents (195) are graduates, while 111 are post graduate degree holders as the highest educational qualifications. The result showed that majority of the respondents have the requisite

knowledge about the subject matter as many of them possessed relevant professional qualifications as well as requisite experience on the job, and their opinion can be used to validate findings of this study.

### Descriptive Statistics of Cash Management Reform (CMR)

The respondents' views on cash management reforms are shown in Table 4.5 based on questions from CMR1 to CMR14. The mean score ranges from 4.23 to 4.46, with standard deviations between 0.578 and 0.895, respectively.

**Table1: Descriptive Statistics for Cash Management Reform**

Items	N	Minimum	Maximum	Mean	Standard Deviation
CMR1	306	1	5	4.24	0.895
CMR2	306	1	5	4.42	0.698
CMR3	306	1	5	4.25	0.644
CMR4	306	1	5	4.38	0.693
CMR5	306	1	5	4.22	0.688
CMR6	306	1	5	4.30	0.810
CMR7	306	1	5	4.36	0.773
CMR8	306	1	5	4.32	0.734
CMR9	306	1	5	4.34	0.815
CMR10	306	2	5	4.28	0.638
CMR11	306	2	5	4.45	0.637
CMR12	306	1	5	4.32	0.644
CMR13	306	1	5	4.23	0.821
CMR14	306	2	5	4.46	0.578

*Source: Author's Computation, 2022*

The result of the respondents' views shows the need for Ministry of Finance to have full control on funds allocation, strengthen budget appropriation authority, instill fiscal discipline, facilitates efficient payment mechanisms and improves bank reconciliation is high at 4.46 and standard deviations of 0.895.

### Normality Test

This test is typically used to determine whether the data collected for the study is normally distributed; thus, in

this regard, the researcher used Skewness and Kurtosis statistics. As seen in table 2, all Skewness and Kurtosis values for the research variable is within Kline's (1998) recommended range of -3 to +3. The score on the variable is assumed to be normally distributed in many parametric statistics (in example, follow the shape of the normal curve). The findings in this investigation as shown in Table 2 shows that result is fairly normally distributed.

**Table 2:Test of Normality**

	N	Skewness	Kurtosis
Financial Performance	306	-1.217	1.156
Cash Management Reform	306	-2.801	1.711
Non-Financial Performance	306	-1.454	2.263

Source: Author's Computation, 2022

### Path Coefficients Results for Model 1 (M1)

Model 1 (M1) was formulated on the assumption that financial and non-financial performance will not be predicted by the Cash Management Reform. This assumption also lays the foundation for hypothesis H<sub>02</sub>. Figure 1 showed that RIL, MAF and CAM are the antecedents of CMR, while CMR also predicts FP and NFP. As presented in Table 3 and Figure 1, the result showed that CMR has influence on non-financial performance ( $\beta = 0.411$ ,  $p < 0.05$ ) and financial performance ( $\beta = 0.335$ ,  $p < 0.05$ ). More so, among the

antecedent variables for CMR, MAF and CAM were significant, while RIL is not significant. The implication of this result indicates that authority for controlled revenue budget has more influence on cash management than service delivery particularly, the antecedent variables for CMR, like de-fragmentation of entities' accounts and cash management control were significant, while revenue leakages blockage is not of high relevance, although both are important for the entities' performance at long run.

**Table 3:Cash Management Reform; Model 1 (M1) Hypothesis Testing**

	$\beta$	Std Error	T-Value	P Values	Confidence Interval	
					5.00%	95.00%
CMR -> FP	0.335	0.118	2.831	0.002	0.190	0.465
CMR -> NFP	0.411	0.108	3.796	0.000	0.203	0.554
MAF -> CMR	0.318	0.132	2.415	0.008	0.112	0.489
RIL -> CMR	0.100	0.125	0.805	0.211	-0.209	0.239
CAM -> CMR	0.447	0.076	5.855	0.000	0.348	0.583

Source: Author's Computation, 2022

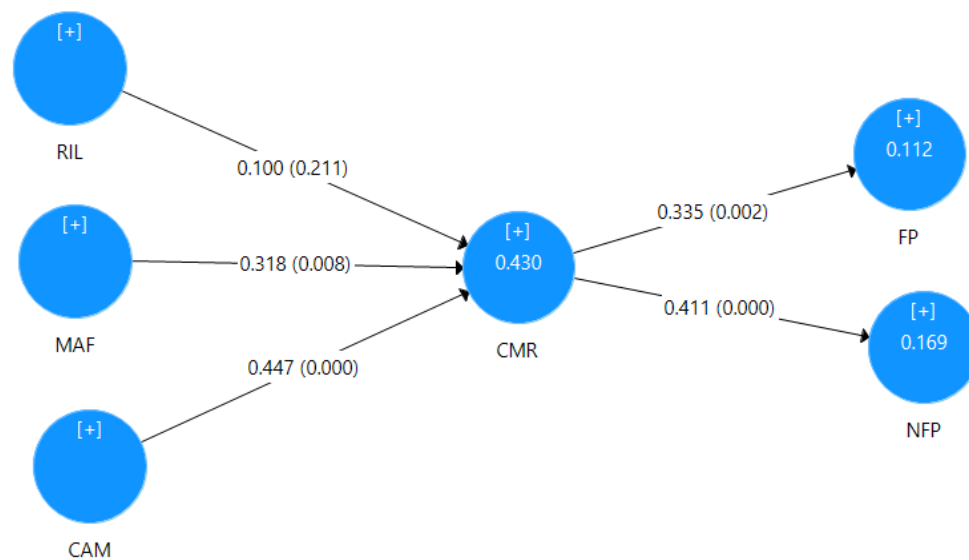


Figure 1:Structural Model for Model 2 (M2); Source; Authur's Conceptualisation.

The analysis in figure 1 display the authenticity of the result of the path coefficient of the structural model on table 3. The Beta ( $\beta$ ) and P Value (P) are values on the lines while the Confidence Interval (CI) are the values on the circles. The figures indicated that all the tests were conducted through Smart PLS.

### Assessment of the Measurement Model

This study assessed the measurement model to determine the validity and reliability of the measurement items. The individual item loadings, internal composite reliability, convergent validity and discriminant validity were examined. All measurement model results measured variables measure what they are supposed to measure based on a grounded theoretical measure (Hair et al., 2016).

### Qualitative Analysis

Theme 1: Cash Management Reforms and Entities' Performance

Cash management reform (CMR) emerged as one of the major themes that contributed to the financial management reforms of the public sector in Nigeria. Majority of the respondents agree to different cash management reform strategies adopted such as the Treasury Single Account (TSA) and the GIFMIS as measures of ensuring effective and efficient cash management within the MDAs. For instance, respondent 3 confirmed that TSA has helped the government to monitor its income and expenditure *"The Treasury Single Account that is known as Cash Management Reform it has gone a long way to assist the federal government in monitoring and controlling the expenditure"*. Similarly, other respondents such as respondent 1 also maintained that TSA and GIFMIS has helped the government ensure transparency and accountability in budgeting for revenue, payment system as well as accounting process.

*...we use it as our payment system and the government maintain a single account which is TSA (Treasure Single Account) i.e a set of link account of all the MDAs and the agencies in the country. So, the introduction of this reforms brings about transparency and also the revenue system has been improved.*

Respondent 3 further claimed that by the provisions of the law, TSA, emerged to create a single centralized form of cash management to make sourcing for revenue and expenditure easy

*Treasury Single Account derives its authority under provision that we have concentrated revenue which is section 'A' of the constitution of the federal republic of Nigeria and the relevant of each is because the provision says that all the sources of income of federal government it should go in that concentrated revenue funds then the Treasury Single Account or Cash Single Account just come to actualized you know the intention of that section of the constitution so how can I say that it has gone a long way to achieve the purpose of the provision in the constitution.*

### Summary of findings, Conclusion and Recommendation

This study finding indicates that for every increase on the impact of Cash Management Reform there will be an increment on the overall performance of government entities as a result of the effects on the reduction on infraction level in Nigeria.

In line with the findings from this study, it was concluded that positive relation exist between cash management reform and performance of government entities in Nigeria.

The study therefore, provide workable suggestions and recommended in line with the study set-out objectives as follows;

i). Government should implement policies to encourage and enhance digital payment systems. This includes strengthening electronic funds transfer, mobile money, and other digital payment platforms to reduce reliance on physical cash transactions, enforce policies that encourage cashless transactions, such as reducing transaction fees for electronic payments, implementing incentives for businesses to adopt cashless systems, and raising awareness about the benefits of cashless transactions, create dedicated units within government

agencies responsible for actively managing cash flows as a matter of priority regularly review and update existing cash management policies to align with changing economic conditions and technological advancements. continue concerted efforts to consolidate government funds into a single account so as to strengthen implementation of Treasury Single Account (TSA) system to centralize cash holdings, improve transparency, and enhance the government's ability to monitor and manage cash balances effectively. These units can regularly assess cash positions, monitor expenditures, and coordinate with relevant stakeholders to optimize cash management and ensure that policies are flexible enough to adapt to evolving financial landscapes.

ii) Government should walk-the-talk on initiatives to promote financial inclusion, foster collaboration with financial institutions as well as implement policies to optimize debt management strategies. This is to ensuring that a larger percentage of the population has access to formal financial services. This can reduce the reliance on cash transactions, contributing to a more efficient and transparent financial system. It will also

create synergies in cash management. Establish regular dialogues with banks and other financial entities to address challenges and explore opportunities for improving cash management processes and ensuring that the government borrows at favorable terms and manages debt service obligations efficiently. This will contribute to reducing interest costs and overall financial risk.

iii) Government should develop and implement policies to improve cash forecasting capabilities that involves adopting advanced forecasting techniques, invest in training programs and capacity building for financial managers and government officials involved in cash management and conduct public awareness campaigns to educate citizens and businesses about the benefits of cash management, electronic payments, and financial literacy. This will facilitate accurate prediction of cash inflows and outflows, allowing for better cash management planning, enhance their skills in implementing effective cash management practices and contribute to a cultural shift towards more responsible financial practices.

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