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TREASURY SINGLE ACCOUNT (TSA): IMPACT ON LIQUIDITY OF COMMERCIAL BANKS

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ABSTRACT

The study presents empirical evidence on the impact of Treasury Single Account on liquidity in the Nigeria banking industry using annual financial report data for the period 2010-2016. The research used the ex-post facto research design. The target population comprised of the commercial banks in Nigeria. The study made use of secondary data extracted from annual reports of studied banks. These data were analyzed using descriptive statistics and Paired Samples t test. Contrary to most previous empirical works and past assertions, the implementation of Treasury Single Account policy had no significant effect on current ratio, liquidity coverage ratio, capital adequacy ratio and a significant increase in loan-deposit ratios. It was recommended that banks uphold strategies to invest in other sectors and aggressive marketing to boost liquidity.

Keywords: Treasury Single Account, Liquidity, Banks.

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1. Introduction

Prior to 2015, revenue-generating MDAs (Ministries, Departments and Agencies) maintained different accounts in commercial banks which they used to fund their operations. The surplus funds after funding operations were remitted to the federation account. The corrupt practices prevalent in the system caused the arbitrary remission of funds. The result of this situation included leakages of funds, embezzlement of public funds, and inability of government to know the exact amount in its account. Budgets were therefore prepared using false projection leading to poor implementation. However, the greatest beneficiaries of this situation were the banks that relied on the deposits from the ministries and government borrowings from banks with high- interest rate. Above all, banks no longer cared to mobilize money from other sectors of the economy (Andornimye, 2017).

According to Kanu (2016) 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. The above resulted in the demand by the Presidency that all agencies and ministries should adopt the Treasury Single Account Approach. Treasury Single Account (TSA) was implemented by the federal government of Nigeria to consolidate all the revenue 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. The TSA is the Federal Government independent Revenue e-collection initiative that will automate Revenue Collections of Ministries, Departments, and Agencies (MDAs) directly into the Federal Government Consolidated Revenue Fund (CFR) account at the CBN through the Remita e-collection platform and other electronic payment channels (Adebayo, 2015).

The review of empirical studies revealed that works on banks liquidity centred on the effect of liquidity on bank's performance (Ibe, 2013; Muthoni, 2015). Some studied its effect on the economy in aggregate terms (Ikya et al, 2017; Kanu, 2016; Oguntodu, Alalade, Adekunle & Adegbie, 2016; Bashir, 2016; Ekubiat & Ime, 2016). Only a few of the studies (Andornimye, 2017; Onuorah & Chigbu, 2016; Ndubuaku, Ohaegbu & Nina, 2017) was found to investigate the effect of TSA on the performance of banks using the regression approach with the first concentrating on liquidity.

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This clearly states a dearth in empirical studies of TSA and its effect on the liquidity of banks. Most statements on TSA affecting liquidity of banks were found to be from rational thoughts rather than empirical determination. To the best of the researcher's knowledge, no work was found to examine significant differences in liquidity positions of commercial banks before and after implementation of TSA in Nigeria empirically using aggregate data. The study thus contributes to knowledge by examining the implications of TSA on commercial banks' liquidity using aggregate data.

Against this backdrop, the study addresses this gap by testing the effect of TSA on the liquidity of commercial banks in Nigeria. The study formulates the following hypothesis in the null form as follows:

Ho_1: TSA implementation has a significant negative impact on commercial banks' liquidity.

2. Review of Related Literature

2.1 Conceptual Framework

2.1.1 Treasury Single Account (TSA)

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 a network of subsidiary accounts all linked to a main account such that, transactions are effected in the subsidiary accounts but closing balances on these subsidiary accounts are transferred to the main account, at the end of each business day (Chukwu, 2015). IMF (2010) defined TSA as a unified structure of government bank accounts that gives a consolidated view of government cash resources. Based on this principle and the unity of treasury, a TSA is a bank account or a set of linked accounts through which the government transacts all its receipts and payments. TSA is based on the principle of unity of cash and the unity of treasury (Lienert, 2009).

The TSA is one of the financial policies implemented by the federal government of Nigeria to consolidate revenue 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 (Andornimye, 2017).

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TSA is primarily designed to bring all Government funds in bank accounts within the effective control and operational oversight of the Treasury, in order to: Enthrone centralised, transparent and accountable revenue management; Facilitate effective cash management; Ensure cash availability; Promote efficient management of domestic borrowing at minimal cost; Allow optimal investment of idle cash; Block loopholes in revenue management; Establish an efficient disbursement and collection mechanism for Government funds; Improve liquidity reserve; and Eliminate operational inefficiency and costs associated with maintaining multiple accounts across multiple financial institutions (CBN, 2015).

The TSA structure accommodates external zero-balance accounts in a number of commercial banks. Secondly, no other government agency operates bank accounts outside the oversight of the treasury. Options for accessing and operating the TSA are mainly dependent upon institutional structures and payment settlement systems. Thirdly, the consolidation of government cash resources should be comprehensive and encompass all government cash resources, both budgetary and extra-budgetary (Oguntodu, Alalade, Adekunle & Adegbie, 2016). This means that all public monies irrespective of whether the corresponding cash flows are subject to budgetary control or not (e.g., in the case of reserve funds, earmarked funds and other off-budget and/or extra budgetary funds) should be brought under the control of the TSA (Shah, 2007).

2.1.2 TSA in Nigeria

Prior to TSA, Nigeria had fragmented banking arrangements for government revenue and payment transactions. Obinna (2015) 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. The initiative to adopt a Treasury Single Account (TSA) was proposed to the federal government by the International Monetary Fund (IMF) in 2010.The proposal was to replace the current practice where government cash management procedure were fragmented, creating opportunities for idle funds domicile in some DMBs that were unknown to the government and unnecessary recourse to borrowing by government.

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Towards it implementation, the Federal Ministry of Finance anchored by the Office of the Accountant-General of the Federation (OAGF) in active collaboration with the Central Bank of Nigeria set up a technical committee that comprise selected MDAs with Revenue Collecting Agencies. The major stakeholders in the project included; BOF, DMO, Federal Inland Revenue Service (FIRS) and Nigeria National Petroleum Corporation (NNPC); While, the World Bank and IMF provide expertise and technical assistance for the implementation of the TSA. The first phase commenced in August 2011, with the Consolidated Revenue Fund (CRF) Account of the Federal Government linked with MDAs capital account balances to derive, a consolidated balance. The second phase commenced in January 2012. This phase consolidated balances to CRF including moving MDAs balances from commercial banks to Federal Government single account (CRF) or connected accounts in CBN. Similarly, the Government Integrated Financial Information System (GIFMIS) took off in the 3rd–4th quarters of 2012 to support the planned TSA banking arrangement of a single account when all the transitional accounts are closed and the balance transferred to the TSA (CBN, 2011).

It is recalled that the call for its use had emerged under the framework of Government Integrated Financial Management Information System (GIFMIS) in former President Olusegun Obasanjo’s regime. Former President Jonathan had also called for its implementation but only a pilot study on 217 MDAs was done. The pilot exercise saved Nigeria about N500 billion in frivolous spending. The success of the pilot study motivated the government to implement fully TSA (Isaac, 2015), leading to the directives to banks to provide the technology platform that will help to accommodate the TSA.

In February 2015, the Federal Government *issued* a directive to all revenue-generating agencies to close their accounts with commercial banks and transfer same into a Consolidated Revenue Fund of the Federation and Treasury Single Account as a new electronic revenue collecting platform by September 2015. This directive conveyed in a CBN circular no. BPS/CSO/CON/DIR/01/079.Dated: February 25, 2015, and addressed to all Deposit Money Banks (DMB). The circular was titled ‘Commencement of federal government's independent revenue e-collection scheme under the Treasury Single Account (TSA) initiative’ (Kanu, 2016).

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Consequently, the Central Bank opened a Consolidated Revenue Account to receive all government revenue and effect payments through this account. All Ministries, Departments, and Agencies under this are expected to remit money collected in to this account through the individual commercial banks who act as collection agents. Although, commercial banks continue to maintain revenue collection accounts for Ministries, Departments, and Agencies, all monies collected by these banks are remitted to the Consolidated Revenue Accounts with the CBN at the end of each banking day. In other words, Ministries, Departments, and Agencies accounts with deposit money banks must have nil balance at the end of every working day by a complete remittance to the Treasury Single Account of all revenues collected.

2.1.3 Liquidity in Banks

Liquidity describes a bank's ability to fund asset increases and meet financial obligations, without incurring damaging losses. It is the bank's ability to immediately meet cash, cheques, other withdrawals obligations and legitimate new loan demand while abiding by existing reserve requirements (Andornimye, 2017). 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. According to Nwaezeaku (2006), liquidity measures the availability of cash and the rate at which current assets are converted into cash to meet ordinary and extra – ordinary request. It implies conversion of assets into cash during the normal course of business and to have regular uninterrupted flow of cash to need outside current liabilities as and when due and payable and also ensure availability of money for day-to-day business operations (Halimeshi, 2014).

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 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 withdraws at short notice.

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2.1.4 TSA and Liquidity in Banks

In relation to the implementation of TSA, banks had been the greatest beneficiaries of the prior system where budgets were prepared using false projection leading to poor implementation. The banks relied on the deposits from the ministries (public money) and government borrowings from banks with high- interest rate. Andornimye (2017) stated that 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 which stunted the growth of the economy. The move to eradicate this situation birthed TSA.

This brought about a change of residence of government funds. Government related deposits had to be transferred from commercial banks. Over the years, deposit money banks had been the custodians of the Nigerian government fund and relied on cheap government deposits to post huge profits. The lenders have since the full implementation of the policy, lost huge revenues and deposits that threatened the continued existence of many mid-tier banks. Confirming the pains of TSA on banks, CBN Director, Banking Supervision, Mrs. Tokunbo Martins, agreed that the TSA regime precipitated some unintended consequences, affecting the operations of banks, especially regarding deposit depletion, asset quality, decrease in revenues and liquidity stress. She said the aggregate deposit transferred to the CBN from the inception of the TSA regime to March 2016, was N2.67 trillion. This sum, which represents 15.14 per cent of the total deposits of commercial banks of N17.63 trillion as at April 30, constitutes the volume of deposits "lost" by banks as a fall-out of the implementation of the TSA regime.

The solution to the government funds management problem brought about another challenge in the banking sector. The transition to TSA posed a serious cash crunch and liquidity challenge to the banking sector, who prior to the introduction of the TSA feed fat on the float created by the duplicated and unaccounted MDAs accounts scattered in all the Deposit Money Banks (DMBs) in Nigeria. Any DMBs that failed to adapt swiftly and look inward to face the core banking functions which they were license, will definitely no longer be profitable, which will leads to heavy downsizing of staff and thereby increasing the unemployment rate in the country (Adebayo, 2015).

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2.2 Theoretical Framework

2.2.1 Incremental Theory of Public Policy-Making

The study is anchored on the incremental theory of public policy making. Theoretically, the theory takes a viewpoint on how policy makers think when there is a need for to take decisions affecting the public. These decisions are usually taken in a condition not too conducive for more deliberation and testing of such proposed policy. The surrounding circumstances majorly scarce resources both of economic and other forms (e.g. time, intellectual ability and cost implication) make policy makers formulate policies which are not necessarily the best of alternatives. Ikelegbe (1995) lends credence to this stating that policy makers under the incremental theory do not review all societal values and problems and all policy alternatives and their resultant consequences. They also do not seek to create optimal policy because of lack of time, data, human and material resources. In line with this study, the effect of TSA on Commercial Banks was not taken into consideration when TSA was being implemented. On the part of the banks, an alternative policy would have been optimal for them in terms of their liquidity. Vahyala, Pwafeyeno, and Minnessi 2016) posits that the directive to adopt TSA in Nigeria as a policy lacked the incremental approach because it was translated into a full-fledged policy without any in-depth study or background checks.

2.3 Empirical Review

Ikya, Akaa, and Ucherwuhe (2017) examined the nature, origin, challenges and lesion for Nigerian experience of the Treasury Single Account. TSA was found to facilitate regular monitoring of government cash balances enables higher quality cash outturn analysis to be undertaken such as identifying causal factors of variances and distinguishing causal factors from random variations in cash balances.

Ndubuaku, Ohaegbu, and Nina (2017) sought to determine the impact of TSA on Credit to the Private Sector, Deposit mobilization and Loans and Advances in Nigeria. The results from the research analysis confirmed that the TSA had a significant impact on all variables.

Andornimye (2017) assessed the impact of TSA implementation on the liquidity capacity of deposit money banks in Nigeria. Findings from the study revealed that Treasury Single Account (TSA) implementation has a negative significant impact on current ratio of banks,

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positive significant impact on deposit mobilization by banks. However, it has no significant impact on credit creation by banks to the public.

Bashir (2016) examined the effect of treasury single account policy on the public financial management in Nigeria. He examined the extent to which Treasury Single Account can block financial leakages, promotes transparency and accountability in the public financial management. The data were analyzed using the Pearson Correlation technique. The result of this research shows that adoption of a Treasury Single Account (TSA) is capable of plugging financial loopholes, promoting transparency and accountability in the public financial system.

Ekubiat and Ime (2016) conducted a survey on 133 professional accountants in Akwa-Ibom state to identify the benefits, challenges and prospects of the adoption of Treasury Single Account (TSA) by State Governments of Nigeria. The data obtained from questionnaire administration were analyzed using descriptive statistics and t-test statistics. The finding reveals that, TSA adoption and full implementation by the state governments will be of greatest benefit. They found there will be challenges in a short-run but the benefits at a long-run will definitely out-weigh the challenges.

Relating to banks, Kanu (2016) assessed the positive effects of the implementation of TSA on the economy, the public accounting system and the undesired consequences on the liquidity base and performance of banking sector in Nigeria. Questionnaires were administered to the Management staff of ten banks selected for the study. Chi-square was used for analysis of the data. The results obtained confirmed that the implementation of Treasury Single Account in the public accounting system impacted negatively on the liquidity base and the performance of banking sector in Nigeria. It was recommended that CBN should go beyond the guidelines and put in place measures to correct any lapses or negative impact of the policy both in the banking sector and the economy at large.

Onuorah and Chigbu (2016) assessed the effect of implementation of Federal Government Treasury Single Account Deposits and commercial banks' performance in Nigeria. The exogenous variable federal government treasury single account deposit was proxied using Federal Government demand deposit, Federal Government time deposit and Federal

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Government saving deposit while the dependent variable Bank performance was proxied using the summation of two performance indicators: Return on Equity (ROE) and Return on Investment (ROI). The study employed descriptive statistics and least square test). The results obtained revealed that the implementation of Treasury Single Account has positive impact on the bank performance in Nigeria.

3. Design and Methodology

The study adopts the ex post facto research design. The study employs secondary data retrieved from published materials in this case, the CBN statistical bulletins. The Paired-samples t-test was employed to make comparisons of liquidity before and after the implementation of TSA with the aid of SPSS version 23. The implementation of TSA in 2015, data for four years post-implementation (2015-2018) were available. To balance this, four years pre-implementation (2011-2014) were also used.

4. Data Presentation and Results

Table 1: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PreTSA	48.3000	4	11.01000	5.50500
	PostTSA	48.4000	4	9.09762	4.54881

Source: SPSS ver. 23

Using mean figures, there was increase in current ratio, liquidity ratio and Loan-Deposit ratio. 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. Capital Adequacy and Credit ratios reduced with the implementation of TSA.

Table 2: Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	PreTSA & PostTSA	4	-.290	.710

Source: SPSS ver. 23

The table above shows that a negative correlation exists between pre TSA and post TSA figures; however, this was not found to be statistically significant.

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4.2 Test of Hypotheses

Ho1: TSA implementation has a significant negative impact on commercial banks' liquidity.

Table 3: Paired Samples Test

		Paired Differences			t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean			
Pair 1	PreTSA- PostTSA	-.100	16.190	8.095	-.012	3	.991

Source: SPSS ver. 23

A negative t value was derived of -0.012. The negative value depicts that liquidity ratio before TSA was less than liquidity ratio with TSA for commercial banks. This was however not found to be to a significant level (p=.991>.05).

Decision Rule: Accept null hypothesis if p value of t is higher than 0.05 (p>0.05); otherwise reject.

From the paired samples table above, the t is -0.012 with significance of 0.991 which is greater than 0.05. The null hypothesis is accepted; thus, TSA implementation has no significant impact on commercial banks' liquidity.

4.3 Discussion of Findings

On the overall, the findings suggest that there was no significant difference in liquidity ratio between the two periods. Current assets covered current liabilities in both periods. This implies that TSA did not affect liquidity management. With the transfer of government funds from deposit money banks to CBN, commercial banks must have awakened to the reality of financial intermediation. 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. Ndubuaku, Ohaegbu, and Nina (2017) however had contrary findings. They found that TSA had a significant impact on Loans and Advances. Andornimye (2017) also found a negative significant impact on current ratio. We suggest the difference in findings is as a result of different types of data employed. They used ratios from selected banks while this study employed aggregate data of all commercial banks compiled by the CBN.

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5. Conclusion and Recommendations

The study concludes that TSA did not affect liquidity significantly as it was presumed to. This position supports what the CBN governor, Godwin Emefiele repeatedly stated that there was nothing to fear about the movement of federal government funds from the banks to the CBN, insisting that it would not have any major negative impact on the liquidity conditions of the banks, contrary to widespread speculations. 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. Based on this, the study recommended that commercial banks look inwards to face the core functions for which they were licensed for and create formidable marketing plans to source for liquid assets and increase their investments. TSA should also be properly administered to enjoy the benefits in public financial management and increase banks' strategic focus. Future researchers can focus on other areas of performance of commercial banks that could be affected by the policy.

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REFERENCES

Adebayo, T. (2015). Implication of Treasury Single Account on Nigeria economy. News Verge, October 2, 2015

Adeolu, I. A. (2015). *Business and Economy; Market development: Understanding the Treasury Single Account (TSA) System*. Ibadan, Oyo State, Nigeria: John Archers Publishers.

Andornimye, L. (2017). Impact of Treasury Single Account (TSA) implementation on bank liquidity in Nigeria. *Scholars Journal of Economics, Business and Management*, 4(4), 260-264

Bashir, Y.M. (2016). Effects of Treasury Single Account on public finance management in Nigeria. *Research Journal of Finance and Accounting*, *7*(6), 164-170

CBN (2015). Guidelines for the operation of Treasury Single Account (TSA) by state governments in Nigeria.

Chukwu, J. (2015). Government will have proper picture of daily revenues. Retrieved from www.ngrguardainnews.com/2015/08

Ekubiat, J. U., & Ime, E. E. (2016). Adoption of Treasury Single Account (TSA) by state governments of Nigeria: Benefits, challenges and prospects. *Journal of Finance and Accounting, 4*(3), 126-130.

Halimeshi, H. K. (2014). *The Role of Treasury Management in Mitigation of Liquidity Risk in the Tanzania Banking Industry: The case of Azania Bank Limited* (Unpublished Thesis). Mzumbe University, Dar es Salaam Campus College.

Ikelegbe, A. O. (1995). Public policy making and analysis. Benin City: Uri Publishing Ltd.

Ikya, E. A., Akaa, S. T., & Ucherwuhe, S. I. (2017). Treasury Single Account: Nature, origin, challenges and lesson for Nigerian experience. *Imperial Journal of Interdisciplinary Research, 3*(5), 787-793.

International Monetary Fund [IMF], (2010). Treasury Single Account: Concept, design, and implementation issues. Retrieved from https://www.imf.org/external/pubs/ft/wp/2010/wp10143.pdf

Isaac, A. (2015). How Treasury Single Account (TSA) may affect economy. (Unpublished Paper).

Kanu, C. (2016). Impact of Treasury Single Account on the liquidity. *ABC Journal of Advanced Research, 5*(1).

Lienert, I. (2009). Modernizing cash management, technical notes and manual. Fiscal Affairs Department, Washington D. C.: International Monetary Fund.

Muthoni, M. R. (2015). *The Effect of Liquidity and Solvency on the Profitability of Commercial Banks in Kenya* (Unpublished Thesis). University Of Nairobi, Kenya.

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, 8*(4), 8-15

Nwaezeaku, N. C. (2006). *Theories and Practice of Financial Management*. Owerri: Ever Standard Publishing.

Obinna, C. (2015). Banks face liquidity strain as FG fully enforces Treasury Single Account. *This Day Monday*, 11 August, 2015

Oguntodu, J. A., Alalade, Y. S. A., Adekunle, Y. A & Adegbie, F. F. (2015). Assessment of Treasury Single Account and Nigeria's

COPYRIGHT © 2019 JOGA

economy between 1999 and 2015. *Journal of Accounting and Financial Management, 2*(6).

Onuorah, A. C., & Chigbu, E. E. (2016). Federal government Treasury Single Account (TSA) deposits and commercial banks performance**,** *Journal of Social and Management Sciences 11*(3), 22-34.

Onyekpere, E. (2015). Treasury Single Account: Giving life to Jonathan's 'dead policy directives'. *The Guardian Newspaper,* September 2015, 23-25.

Shah, A. (2007). Local public financial management: Public sector governance and accountability series. *The World Bank Working Paper*.

Vahyala, A. T., Pwafeyeno, M. & Minnessi, G. K. (2016). Treasury Single Account (TSA) policy in Nigeria: Reviving Jonathan's 'Dead' Policy Directives. *Online Journal of Social Sciences Research*, *5*, 6-12.

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